# TELEFUNKEN A-314M

MODEL

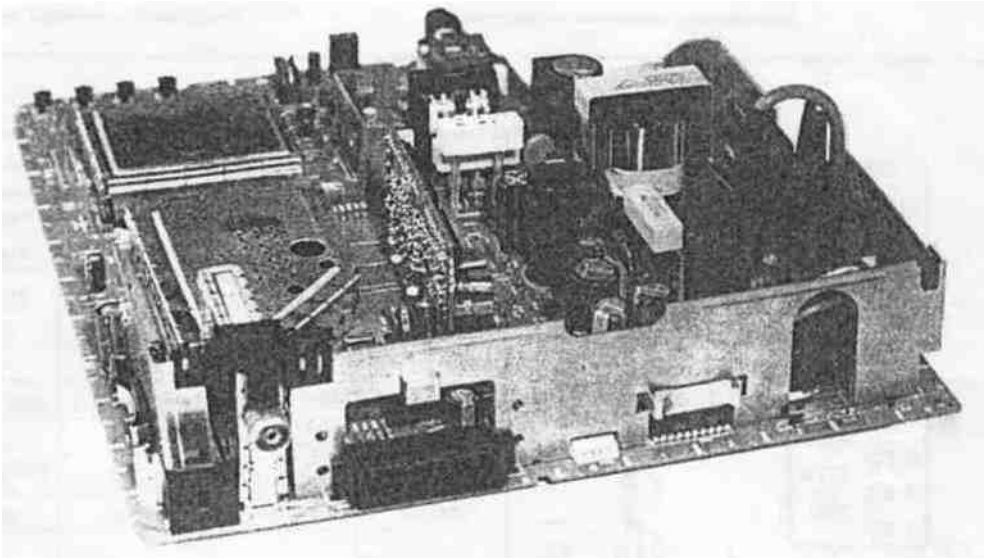
SERVICE MANUAL

# THOMSON CONSUMER ELECTRONICS

**NORDMENDE** THOMSON TKCHNOLOOY | **SABA** | **TELEFUNKEN** | **THOMSON**

SERVICE MANUAL
DOCUMENTATION TECHNIQUE
TECHNISCHE DOKUMENTATION
DOCUMENTAZIONETECNICA
DOCUMENTACIONTECNICA

# Chassis TX91



/f\ Indicates specially selected or critical safety components and identical components should be used for there replacement. This is necessary in order to maintain the operational safety of the receiver.

Le remplacement des elements de securite (reperes avec le symbole /1\ ) par des composants non homologues selon la Norme CEI 65 entraine la non-conformite de l'appareil. Dans ce cas, la responsabilite du fabricant n'est plus engagee.

Wenn Sicherheitsteile (mit dem Symbol /t\ gekennzeichnet) nicht durch Original-Ersatzteile ersetzt werden, eriischt die Haftung des Herstellers.

La sostituzione degli elementi di sicurezza (marchi con il segno/i\) con componenenti non omologati secondo la norma CEI 65 comporta la non conformita dell'apparecchio. In tal caso e "esclusa la responsabilita " del costruttore.

La subtitucion de elementos de seguridad (marcados con el simboloZ!X) por componentes no homologados segun la norma CEI 65, provoca la no conformidad del aparato. En ese caso, el fabricante cesa de ser responsable.

## MEASUREMENT CONDITIONS - CONDITIONS DE MESURES - MESSBEDINGUNGEN CONDIZIONI DI MISURA - CONDICIONES DE MED1DAS

**RECEIVER:** UHF Input level. 1 mV test bar pattern. RM. I standard. 100% white

Scan input level. 1.0 Vpp test bar panern.

Programme PR01. Customer controls, Contrast, brightness and colour set at mid point and sound at minimum.

Atl"DC 'voltages are measurëd wïth"a 'digital meter between ground and the reference point.

RECEITEUR: E",,"F "mau c'entee I mV mire de banes • SECOil Noun L Bane IW.

Par a *yse PssSmm. mw* 0'Hitee I Vcc. aurede tons.

*ca^* srtasle. tonwe a *m-owx.* son *mimm.* Ptcwi-»a«eaePRI)I.

•ascrecsranuesretaieespatrappnIalaiTasstMciin icawte runenme

EMPFANGER: Be UHF Eincanospegel 1 mV. Faitoaken: .PAL. Norm 6 WMS 100%.

unei *y* Sca."uc"s«: E.nca'ssoegd 1 Vss Faaattn:

Faite Kcriaa Heidkm in to Mite des teachs Ton auf Mimm ZugewonresPiicramnPROI.

a«icfB(ia)iOt'W]n«teintindioilalM*illiwt»arltes<g«i»sstii

MCEVnORE InUHF. Mbd'enntalm^monosoxiopwbatre: •PAL, nonnaG.bBncoll)0%.

Pei la piessa SCART. Irwic d'emata 1 Vcc. moniscoK pM barn:

Cokxe. CwrasB Luc< a mea area. **Suoni** mnino. Proyaniffla designalo PR 01

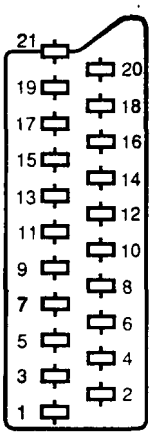
Tensiau continue ntevate nspelto aria massa con ufiwnametro nuflwica.

**BECEPTOR:** En UHF, mil de fntada 1 niV, nn A banas: -PAL, norma G. fanco 1011%.

Pa b tana Penleleisoi. n»ei ae ennoll 1 Vet roa ^ tiara.

Cola. Contiaste. uz a miud de *emu* Smdo mnnu. PfairamaafectaooPROI,

Tensioriescontinuasmarcadasafinla Qona^masaconunnljfnetrodigrtaL




**NOTE** :(MAIN) ... etc. identifies each pcb module.

NOTE :(MAIN)... etc. reperes des platines constituant l'appareil.

**HINWEIS :** (MAIN) ...usw. Kennzeichnungen der Platinen, aus denen das Gerat zusammengesetzt ist.

**NOTA** :(MAINJ... ecc. indicazioni delle piastre che costituiscono l'apparecchio.

**NOTA** :(MAIN).,. etc. marcas de las placas que constituyen el aparato.

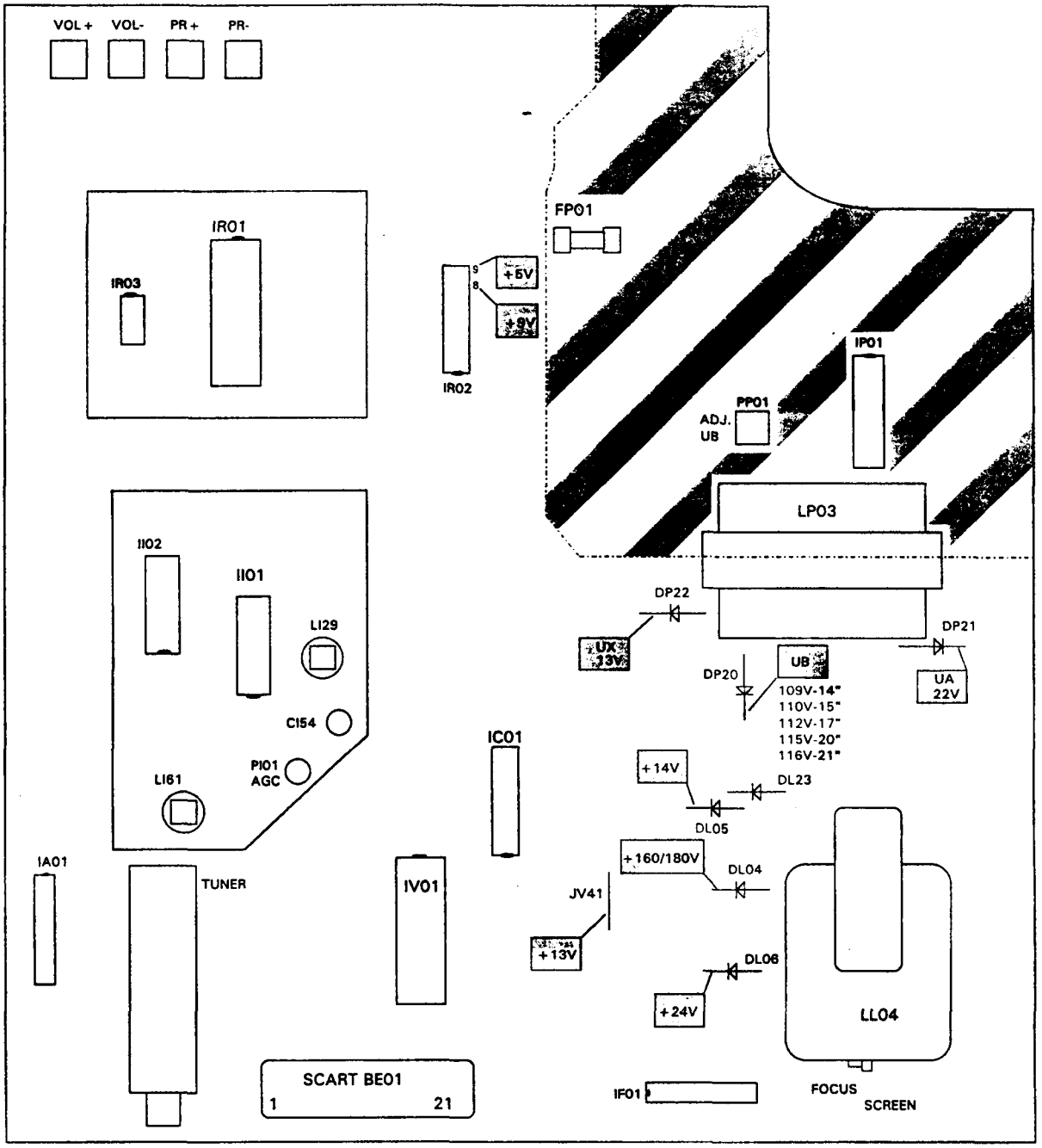
| ⌒ | | ENGLISH | FRANCAIS | DEUTSCH | ITALIANO | ESPANOL |
|---|---|---|---|---|---|---|
| 1 | G» | AUDIO •R" | AUDIO "D" | AUDIO -R" | AUDIO "0" | AUDIO "D" |
| 2 | ^) | AUDIO "R" | AUDIO "D- | AUDIO "R" | AUDIO "D" | AUDIO "D" |
| 3 | G» | AUDIO "L" | AUDIO -G" | AUDIO "L" | AUDIO "S" | AUDIO "I" |
| 4 | — | AUDIO | AUDIO | AUDIO | AUDIO | AUDIO |
| 5 | — | • BLUE" | • BLEU - | "BLAU" | "BLU" | "AZUL" |
| 6 | -® | AUDIO •L' MONO | AUDIO -G- MONO | AUDIO •L' MONO | AUDIO'S' MONO | AUDIO •I- MONO |
| 7 | ^) | • BLUE • | "BLEU • | •BLAU" | BLU | AZUL |
| 8 | -® | SLOW SWITCH | COMMUT. LENTE | AV UMSCHALTUNG | •COMMUTAZIONE LENTA' | •CONMUTACION LENTA- |
| 9 | –. | • GREEN" | "VERT" | •GRUN" | "VERDE" | "VERDE" |
| 10 | NC | | | | | |
| 11 | -® | "GREEN" | "VERT™ | "GRUN" | "VERDE" | "VERDE- |
| 12 | NC | | | | | |
| 13 | — | •RED" | "ROUGE" | "ROT" | •ROSSO" | "ROJA" |
| 14 | NC | | | | | |
| 15 | -^ | •RED- | "ROUGE- | "ROT" | "ROSSO" | "ROJA" |
| 16 | ^) | FAST SWITCH | COMMUT. RAPIDE | AUSTASTUNG | •COMMUTAZIONE BAPIDA- | •CONMUTACION RAPIDA- |
| 17 | — | VIDEO | VIDEO | VIDEO | VIDEO | VIDEO |
| 18 | — | FAST SWITCH | COMMUT. RAPIDE | AUSTASTUNG | •COMMUTAZIONE RAPIDA" | "CONMUTACION RAPIOA" |
| 19 | O» | VIDEO | VIDEO | VIDEO | VIDEO | VIDEO |
| 20 | -© | VIDEO OR "SYNC" | VIDEO SYNCHRO | VIDEO ODER SYNCHRO | VIDEO OSINCRO | VIDEO 0 SINCRO |
| 21 | O» | PLUG SCREEN BOX | BLINDAGE PRISE | ABSCHIRMUNG DES STECKERS | ARMATURA DELLA SPINA | BLINDAJE DEL ENCHUFE |

**: OUTPUT - SORTIE - AUSGANG - USCITA - SALIDA**

**:** INPUT - ENTREE - EINGANG - ENTRATA - ENTRADA

**: EARTH - MASSE - MASSE - MASSA - MASA**

LOCATION OF CONTROLS - EMPLACEMENT DES REGLAGES - SERVICE LAGEPLAN
POSIZIONE REGULATORI DI SERVIZIO - SITUACION DE LOS AJUSTES




## ADJUSTMENTS - REGLAGES - EINSTELLUNGEN - REGOLAZIONE - AJUSTES

| | | | | |
|---|---|---|---|---|
| **UB** | PP 01 | Contrast, brightness and volume to minimum | DP20 | 14" : 109 V<br>15" : 110V<br>17" : 112V<br>20" : 115V<br>21" : 116V |
| **U G2** | SCREEN | AV (no Signal, black screen) | CRT<br>Pin 3,7,9<br>(Pin 6,8,11)<br>highest output | 130V-14"<br>140V-17"<br>160V-20" |
| Focus | **FOCUS** | Test pattern<br>(standard values) | | Sharp picture |

# SERVICE MODE

It is necessary to enter the Service Mode in order to carry out alignment of the TV set. Most adjustments can be made with the RCU, except the Usystem, Focus and Screen voltages.

## 1. Service Mode Access

1.1 With the RCU. switch the TV set into the **"Standby"** mode.
**1.2** Switch **"Off"** the TV set using the mains supply switch.
1.3 Whilst depressing the RCU **"Blue(VT)"** button, switch **"On" the TV set** using the mains supply switch.
1.4 Release and press once again the RCU **"Blue(VT)" button,** the following **"Set-Up"** menu should be displayed.

| SET-UP | VIDEO | GEOM |
|---|---|---|
| **xxx** 123456789 | | Configuration |

**Important:** The Service Mode cannot be entered if any equipment is connected to the Scart socket, i.e. pin 8 switching voltage present.

## 2. Function Selection

**2.1** With the Volume "+" and "-" RCU buttons, highlight the menu containing the function to be aligned.
**2.2** Press the RCU "Blue(VT)" button to highlight the function to be aligned.

## 3. Switching between Service and TV modes

3.1 Whilst in the Service Mode, normal TV controls are disabled, to enable these controls whilst in the Service mode (i.e. for channel changing etc.) press the "TV" button on the RCU. To return to the Service mode, press the "Blue(VT)" button on the RCU

## 4. Alignment and storing new function value

**4.1** The current value of the selected function is displayed in an hexadecimal form to the right of the functions name. This value is adjusted by means of the Volume "+" and "-" RCU buttons.
4.2 To STORE the functions new value, highlight MEMO and press the Volume "+" RCU button.
4.3 To RESTORE the functions original value, highlight R-STO(RE) and press the Volume "+" RCU button.
**4.4** Selecting the **ROM** function downloads the production software default values, these are not very accurate and should only be used in very special cases.

## 5. Leaving the Service Mode

5.1 To leave the Service mode either, switch the **TV set into "Standby"** or switch **"Off"** the mains supply.

# MODE SERVICE

**Le** mode service sert au reglage de l'appareil. Toutes les operations **de** reglage s'effectuent a l'aide de la telecommande (sauf la **tension de** systeme, les mises au point et les tensions de grille-ecran).

## 1. Acces du mode service

1.1 Commuter le televiseur en position de veille avec la telecommande
1.2.Mettre le televiseur hors service par l'interrupteur secteur.
1.3 -Maintemr la louche bleue enfoncee et mettre simultanement le televiseur en marche avec l'interrupteur secteur.
1.4 Le menu suivant apparait apres avoir appuye a nouveau sur la louche bleue

| SET-UP | VIDEO | GEOM |
|---|---|---|
| **xxx** 123456789 | | Configuration |

Attention : Le mode service n'est pas accessible si un appareil est connecte a la prise peritelevision.

## 2. Selection de la fonction

Par les touches +/- de la telecommande vous pouvez choisir le menu correspondant (SET UP, VIDEO ou GEOM) et le "feuilleter" avec la louche bleue(VT).

## 3. Inversion entre modes service et TV

**Les** fonctions television normales ne sont pas utilisables en mode service. **Si** elles sont necessaires en mode service (p. ex. changement de programme), la touche ( **TV** ) permet de commuter en mode **TV. Vous** pouvez revenir au mode service en appuyant sur la touche bleue.

## 4. Reglage des fonctions selectionnees et memorisation

La valeur momentanee de la fonction selectionnee est indiquee sous forme hexadecimale a droite, a cote de la position a regler et pent etre modifiee avec la telecommande par la touche + ou -.
La ligne MEMO permet de memoriser les nouvelles valeurs de reglage avec la touche +. La ligne R-STO(RE) permet de rappeler les valeurs memorisees en NVM. Les valeurs par defaut du logiciel peuvent etre chargees en selectionnant la ligne ROM. Elles ne constituent cependant qu'une approximation du reglage et ne doivent etre utilisees qu'en cas de nesessite.

## 5. Abandon du mode service

Pour abandonner le mode service, commuter le televiseur **en** position **de** veille ou le mettre hors service par l'interrupteur secteur.

# SERVICE-MODE

**Der** Service-Mode wird fur den Gerateabgleich benotigt. Alle Einstellungen erfolgen mil der Fernbedienung (bis auf Systemspannung, Fokuseinstellung **und** Schirmgitterspannung).

## 1.Service-Mode einschalten

1.1 Mit der Fernbedienung das Fernsehgerat in Stand-by schalten.
**1.2** Das Gerat mit dem Netzschalter ausschalten.
**1.3** Die blaue Taste der Fernbedienung gedruckt halten und gleichzeitig das Gerat mil dem Netzschalter einschalten.
1.4 Das folgende Menu erscheint nach erneutem Drucken der blauen Taste

| SET-UP | VIDEO | GEOM |
|---|---|---|
| xxx 1234567B9 | | Configuration |

**Achtung:** Der Service-Mode laBt sich nicht einschalten, wenn an einer Euro-AV-Buchse ein Gerat aktiviert ist. d.h. die Schaltspannung aniiegt.

## 2. Funktionswahl

Mit den Tasten +/- wird **das entsprechende Menu gewahlt. welches mit der** blauen Taste "durchgebiattert wird".

## 3. Umschalten zwischen Service- und TV-Betrieb

Im Service-Mode sind die normalen Fernsehfunktionen nicht bedienbar. Werden diese im Service-Mode benfitigt (z.B. Programmwechsel), kann mit der Taste ( TV ) in den normalen TV-Betrieb geschaltet werden. Durch Driicken der blauen Taste gelangt man zuruck zum Service Mode.

## 4. Abgleich der gewahlten Funktion und Speichern

Der momentane Wert der gewahlten Funktion wird hexadezimal rechts neben der abzugleichenden Position angegeben und kann mit der Taste + bzw. - auf der Fernbedienung verandert werden.
Die Anderungen des jeweiligen Menus konnen unter MEMO **mit def *Taste** gespeichert. bzw unter R-STO(RE) ruckgangig gemacht werden.
**Im** Meniipunkt ROM kann man die Software-Defaultwerte laden. **Sie sind** aber nur eine grobe Annaherung an den noch vorzunehmenden Abgleich **und** sollten nur im Notfall verwendet werden.

## 5. Service-Mode verlassen

Zum Venassen des Service-Mode **das Gerat in Stand By schalten Oder mit dem** Netzschalter ausschalten.

# SERVICE-MODE

Il Service-Mode e necessario per l'allineamento dell'apparecchio. Tutte le regolazioni si effettuano con il telecomando. (a parte la tensione del sistema, le regolazione del fuoco e le tension! della griglia schermo).

## 1. Attivazione del Service-Mode

1.1 Commutare il televisore in stand-by con il telecomando.
**1.2** Spegnere l'apparecchio con l'interruttore di rete.
**1.3** Tenere premuto il pulsante blu e accendere contemporaneamente l'apparecchio con l'interruttore di rete.
1.4 Il seguente menu appare non appena si aziona nuovamente il pulsante blu

| SET-UP | VIDEO | GEOM |
|---|---|---|
| **xxx** 1234567B9 | | Configuration |

Attenzione: Il Service-Mode non si puo attivare se e attivato un apparecchio collegato alia presa di pentelevisione AV, doe se e presente la tensione ausiliaria.

## 2. Scelta della funzione

**Con** i last! +/- si seleziona il relative **menu che pud "essere sfogliato" con** il pulsante blu.

## 3. Commutazione fra funzione Service-Mode e TV

Nella modalita Service-Mode non si possono attivare le normali funzioni televisive. Se occorre richiamarle in Service-Mode (ad es. se si vuole cambiare il programma). si puo attivare la normale modality TV con il pulsante ( TV). Premendo il pulsante blu si riattiva il Service-Mode.

## 4. Taratura della funzione scelta e memorizzazione

**Il** valore momentaneo della funzione scelta viene indicato in formato esadecimale a destra, accanto alia posizione da allineare e pub essere cambiato con il pulsante + o - del telecomando.
**Le** modifiche effettuate net relative menu si possono memorizzare in MEMO **con** il pulsante + oppure annullare in R-STO(RE).
Nell'opzione di menu ROM si possono caricare i valori di default del software. Essi rappresentano pero una taratura approssimativa prima di eseguire quella definitiva e si dovrebbero usare solo in caso di emergenza.

## 5. Disattivazione del Service-Mode

Per disattivare il Service-Mode, commutare l'apparecchio in stand-by 0 spegnerio con l'interruttore di rete.

# MODO SERVICIO ©

Se necesita el MODO SERVICIO para ajustar el aparato. Todos tos ajustes **se** hacen con el mando a distancia (a exception de la tension del sistema, los ajustes del toco y las tensiones de la rejilla de pantalla).

### 1. AJUStar el MODO SERVICIO

1.1 Con el mando a distancia conectar a STANDBY el televisor.
1.2 Desconectar el aparato con el interruptor de la red. ~
1.3 Mantener pulsada la tecia azul y conectar el aparato simultaneamente con el interruptor de red.
1.4 El menu siguienteaparecevolviendo a pulsar la tecia azul.

S E T - U P | V I D E O I G E O M I

xxx 123456789 Configuration

**Atencl6n:** No se puede conectar el MODO SERVICIO cuando en Eurotoma-AV esta activado un aparato, es decir, cuando existe tension de CO"6"6"-

### 2. Seleccion de las funciones

Con las teclas +/- **se** selecciona el menu correspondiente que "hojea" con la tecia azul.

### 3- Conmutar entre funcionamiento Servicio y TV

En 61 MODO SERVICIO las fundones de television normales no pueden operarse. Si se necesitan estas en MODO SERVICIO (p.ej,, cambio **de** programa), con la tecia (TV) puede conmutarse a la operacion TV normal. Pulsando la tecia azul sevuelveal MODO SERVICIO.

### 4. Ajuste de la funcion elegida y almacenamiento

El valor momentaneo de la funcion elegida es indicado de modo hexadecimal a la derecha, al lado de la posicion a ajustar, y puede cambiarse con la tecia + o bien - en el mando a distancia. Los cambios del menu respective pueden almacenarse bajo MEMO con la tecia + o bien anular bajo RESTORE .

En e1 P"10 de nienu ROM se pueden cargar los valores por defecto del software. Sin embargo, son solo una aproximaci6n basta al ajuste aun a realizar y deben usarse solo en caso de emergencia.

### 5_ Salir del MODO SERVICIO

Conmute el aparato a STANDBY a fin de salir del MOOO SERVICIO 0 desconectar con el interruptor de la red.

**Example**

| SET-UP |
|---|
| Software code and configuration |
| NORM B BD BLD BIL L I |
| VT LANG 0 1 2 |
| - R-STO + MEMO 0 ROM |

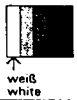
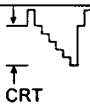
**Example**

| VIDEO | | |
|---|---|---|
| R-DC | 00-3F | 23 |
| G-DC | 00-3F | 24 |
| R-DRV | 00-3F | 1D |
| G-DRV | 00-3F | 21 |
| B-DRV | 00-3F | 1F |
| PEAK | | (-/+) |
| + MEMO | | |
| + R-STORE | | - ROM |

**Example**

| GEOM | | |
|---|---|---|
| H-PHA | 00-3F | 26 |
| V-POS | 00-07 | 02 |
| V-AMP 50Hz | 00-3F | 25 |
| V-AMP 60Hz | 00-3F | 1C |
| - R-STO | + MEMO | 0 ROM |

| SET-UP | |
|---|---|
| NORM | Standards:<br>B = BG PAL-SECAM<br>L = L SECAM(F)<br>D = DKK´ SECAM<br>I = I PAL (UK / IRELAND) |
| VT-LANG. | Video Text Language<br>0: GB, D, SF, I, F, E, CZ, GB<br>1: PL, D, SF, I, F, YU, SZ, R<br>2: GB, D, SF, I, F, E, TR, GB |

| VIDEO | | |
|---|---|---|
| R-DC* | | |
| G-DC* | | |
| R-DRV | | |
| G-DRV | | |
| B-DRV | |  |
| PEAK |  | 14" : 60V<br>15" : 70V<br>17" : 80V<br>20" : 90V<br>21" : 95V |

| GEOM | | |
|---|---|---|
| H - PHA | | |
| V - Pos | | |
| V - Amp 50 Hz | | |
| V - Amp 60 Hz | | |

**TV configuration**

| | |
|---|---|
| T | TEXT MODULE |
| S | STEREO MODULE |
| M | MONO |

* adjust separate for PAL and SECAM
* régler séparément pour PAL et SECAM
* für PAL und SECAM getrennt einstellen
* regolare separatamente per PAL e SECAM
* ajustar separadamente para PAL y SECAM

*(from Software version EM11 onward)*

# TABLE OF DIFFERENT VALUES - TABLE DES DIFFERENTES VALEURS •

## ** TX 91 TABLE

| NORM | BGDKK' | | BGHILL ' | | BGDKK` | BGHILL` |
|---|---|---|---|---|---|---|
| COLOUR | PS | | PS | | PS(NTSC VIDEO) | |
| ITEM / SCREEN SIZE | 14" | 20" | 14" | 20" | 14" | 14" |
| CI10 CI11 CI12 CI13 CI14 CI15 CI36 CI37 CI52 CI53 CI54 CI60 DI50 DI51 DI52 II02 JI01 JI02 JI03 JI04 JI07 JI12 JI13 JI16 JI22 JR31 JR47 QI02 RI11 RI33 RI35 RI38 RI47 RI50 RI51 RI52 RI53 RI54 RI55 RI56 RI57 RR20 TI03 TI04 TI28 TI30 | DEL | DEL | INSERT | INSERT | DEL | INSERT |
| CI64 JA12 JI24 JI25 JI36 JI37 JR35 JR39 RI62 RI70 RI71 RI72 TI02 | INSERT | INSERT | DEL | DEL | INSERT | DEL |
| CI62 | DEL | | DEL | DEL | DEL | DEL |
| CI66 | 39P | | 18P | 18P | 39P | 18P |
| CI67 | 6P8 | | 2P2 | 2P2 | 6P8 | 2P2 |
| CI68 | 6P8 | | 2P2 | 2P2 | 6P8 | 2P2 |
| DI33 | STRAP | STRAP | BA282 | BA282 | STRAP | BA282 |
| DI34 | STRAP | STRAP | BA282 | BA282 | STRAP | BA282 |
| RI04 | 68R | 68R | 180R | 180R | 68R | 180R |
| RI32 | 10K | 10K | 1K | 1K | 10K | 1K |
| IV01 | STV2112 | STV2112 | STV2112 | STV2112 | STV2118 | STV2118 |
| QCB2 | DEL | DEL | DEL | DEL | 3.58MHz | 3.58MHz |
| QI01 | FILSW K2955M | FILSW K2955M | - | - | FILSW K2955M | - |
| QI31 | FILC 6.5MHz | FILC 6.5MHz | FILC 6MOHZ | FILC 6MOHZ | FILC 6.5MHz | FILC 6MOHZ |
| QI33 | FILC 6M5HZ | FILC 6M5HZ | FILC 6MOHZ | FILC 6MOHZ | FILC 6M5HZ | FILC 6MOHZ |
| J406/CI38/CI39 | TO BE DEFINE | | | | | |
| RI60 | 0R0 | 0R0 | 2K7 | 2K7 | 0R0 | 2K7 |
| IR01 PIN 12 | BG-TRAP | BG-TRAP | OPEN | OPEN | BG-TRAP | OPEN |
| IR01 PIN 31 - RR20 (SOUND SW) | OPEN | OPEN | 180R | 180R | OPEN | 180R |
| DI62 | Deleted | Deleted | 1N4148 | 1N4148 | Deleted | 1N4148 |
| RI74 | 0R0 | 0R0 | 56R0 | 56R0 | 0R0 | 56R0 |
| CH01 | 18U0 | 18U0 | 47U0 | 47U0 | 18U0 | 47U0 |
| LI61 | 29.65MHz | 29.65MHz | 32.4MHz | 32.4MHz | 29.65MHz | 32.4MHz |
| LI63 | 5,6UH | 5,6UH | 4,7UH | 4,7UH | 5,6UH | 4,7UH |
| CA07 | 330p | 330p | 470p | 470p | 330p | 470p |
| CA09 | 330p | 330p | 390p | 390p | 330p | 390p |
| RA23 | 5K6 | 5K6 | 5K6 | 5K6 | 5K6 | 5K6 |
| RI12 | 5K6 | 5K6 | 5K6 | 5K6 | 5K6 | 5K6 |
| RI13 | 5K6 | 5K6 | 5K6 | 5K6 | 5K6 | 5K6 |

** TX91 COMPONENTS MATCHING FOR FBT ACCORDING TO SCREEN
14" 15" 17" 20"&21"

| SCREEN SIZE | 14" (EU/TTT) | 15" (TTT) | 17" (EUROPE) | 20" (EUROPE) | 20" (EUROPE) |
|---|---|---|---|---|---|
| TUBE | CHUNG HWA | TOSHIBA | PHILIPS | POLKOLOR | POLKOLOR |
| TUBE REF. | 370KRB22-TC38 | A36JAR40X01 | A41EAM40X01 | A48EEV13X01 | A48EEV13X01 |
| LP03 | 20264960 | 20264960 | 20264960 | 20349930 | 20349930 |
| RP20 | RMF R27 3W | RMF R27 3W | RMF R27 3W | RMF R22 3W | RMF R22 3W |
| JP06 | STRAP 10MM | STRAP 10MM | - | STRAP 10MM | STRAP 10MM |
| JP07 | - | - | STRAP-15MM | - | - |
| LL05 | FCV-1410-E18 | FCV-1410-E18 | FCV-1410-E18 | FCV-2010E07 | 203832 10 PI |
| LL03(LIN COIL) | LL90uH | LL90uH | LL90uH | LL58uH | LL58uH |
| CL04(TUN CAP) | CFS 6N5 1K6 | CFS 6N5 1K6 | CFS 6N3 1K6 | CFS 6N3 1K6 | CFS 7N6 1K6 |
| CL18 | CC 680P 2KV | CC 680P 2KV | CC 680P 2KV | CC 680P 2KV | CC 680P 2KV |
| CL05(S.CAP) | CFS 390N 250V | CFS 390N 250V | CFS 390N 250V | CFS 470N 250V | CFS 470N 250V |
| RL22 | RMOF 91K 1W | RMOF 82K 1W | RMOF 91K 1W | RMOF 82K 1W | RMOF 82K 1W |
| RL13 | RCFF 0.56R 0.5WJ | RCFF 2R7 0.5WJ | RCFF 2R7 0.5WJ | RCFF 1.5R 0.5WJ | RCFF 1.5R 0.5WJ |
| RL14/JL12 | RCF 1R5 0.5W | RCF 2R2 0.5WJ | RCF 2R2 0.5WJ | RCF 2.2R 0.5WJ | RCF 2.2R 0.5WJ |
| JL07/LL07 | STRAP 10MM | STRAP 10MM | LF100UF | STRAP 10MM | STRAP 10MM |
| RF07 | RMFMN 121R 1% | RMFMN 121R 1% | RMFMN 127R 1% | RMFMN 121R 1% | RMFMN 121R 1% |
| RF08 | RMFMN 909R 1% | RMFMN 866R 1% | RMFMN 909R 1% | RMFMN 866R 1% | RMFMN 866R 1% |
| RF15 | RCFMN 390K 0.1WJ | RCFMN 360K 0.1WJ | RCFMN 390K 0.1WJ | RCFMN 330K 0.1WJ | RCFMN 330K 0.1WJ |
| CRT(INTEGRATED) | 7 TR VERSION | 7 TR VERSION | IC VERSION | IC VERSION | IC VERSION |
| MAIN PCB (A900) | 2026155A | 2026155A | 2035015A | 2035015A | 2035015A |
| UB MIN BEAM CURRENT | +109V | +110V | +112V | +115V | +116V |
| JP12/LP05 | STRAP 10mm | STRAP 10mm | STRAP 10mm | STRAP 10min | STRAP 10mm |
| CF05 | CE1000UF | CE680UF | CE680UF | CE1000UF | CE1000UF |
| RL12 | RCFF 0.56R | RCFF 1R5 | RCFF 1R5 | RCFF 0.56R | RCFF 0.56R |
| DP21 | IS1834 | IS1834 | IS1834 | PFR852 | PFR852 |
| CL08 | CPM 6N8 100V | CPN 6N8 100V | CPN 6N8 100V | CPN 8N2 100V | CPN 8N2 100V |
| RL08 | RMOF 33R 1W | RMOF 33R 1W | RMOF 33R 1W | RMOF 18R 1W | RMOF 18R 1W |

# TABLE OF DIFFERENT VALUES - TABLE DES DIFFERENTES VALEURS •

## ** TX 91 TABLE

| NORM | BGDKI | | BGHILL | | BGDKK' | BGHILL' |
|---|---|---|---|---|---|---|
| COLOUR | PS | | PS | | PS(NTSC VIDEO) | |
| SCREEN SIZE | 14" | 20" | 14" | 20" | 14" | 14" |
| CR01 | FOR DC-DC CONVERTER | | | | | |
| CH08/CH14/CV08/CH16/CK04/CH17 | TO BE DEFINE | | | | | |
| CA20/CA21/RI17/LI04 | FOR STEREO BOARD | | | | | |
| LV87 | FOR CINCH BOARD ONLY | | | | | |
| CK07/CK08/CK09/CK10 | TO BE DEFINE | | | | | |
| TXT BOARD | OPTION TOCOM 20361450(4 PAGE) | | | | | |
| STEREO MODULE | OPTION STEREO MODEL TOCOM : 20420570 NICAM/STEREO TOCOM : 20335240 | | | | | |
| BA04/JA05 | WITH BA04 DELETED JA05 | | | | | |
| BT01/BT1A | 20174620 | 20174650 | 20174620 | 20174650 | 20174620 | 20174620 |
| CR19/CR20/CR21/CR22 | TO BE DEFINE | | | | | |
| SR01 | OPTION FOR DOUBLE SCART | | | | | |
| BR08 | OPTION FOR PSN LED INDICATOR | | | | | |
| CA20<br>CA21<br>CC21<br>CC23<br>RC23<br>CF01<br>MF02 | TO BE DEFINE | | | | | |
| RR69 | INSERTED 1K0 FOR CLK/RADIO OPTION. | | | | | |
| RR72 | INSERTED 1K0 FOR CLK/RADIO OPTION. | | | | | |
| RT66 RT76 CT56 CT66 CT76 | TO BE DEFINE | | | | | |
| BR09 | INSERTED FOR CLK/RADIO OPTION. | | | | | |
| DR06 JR59 JA25 RA07 TA04 TA05 DA04 DA05 CA14 CA08 | DELETED WITH CLK/RADIO OPTION | | | | | |
| DK01 | OPTION FOR ATTACHED KEY BOARD ONLY | | | | | |
| CP10 | TO BE DEFINE | | | | | |
| BR07, RR88 | TO BE DEFINE | | | | | |
| RV25 | RCFMN 20K FOR 14" | | | | | |
| LP01, JP08, JP11 | DELETED LP01 & REPLACE BY STRAP 10 mm (JP08,JP11)<br>(POWER CORE MUST USED 2 X 300UH SUPPRESSION CHOKE)<br>(FOR BGHILL' SET ONLY) | | | | | |
| RI17/ LI04 | FOR STEREO BOARD | | | | | |

## DIFFERENCE BEETWEEN PSN BGDKK', PAL BG AND PAL I

| | PSN BGDKK' (NTSC VIDEO) | PAL BG (NTSC VIDEO) | PAL I (NTSC VIDEO) |
|---|---|---|---|
| POS | DESCRIPTION | STRUCTURED NAME | STRUCTURED NAME |
| CI63 | CCMIN INF 50VK | RCFMN 0 OHM | RCFMN 0 OHM |
| CI64 | CCMIN 4N7 16V M | DELETED | DELETED |
| CI65 | CCMIN 47P0 50VJ | DELETED | DELETED |
| CI66 | CCMIN 39P0 50VJ | DELETED | DELETED |
| CI67 | CCMIN 6P8 50VK | DELETED | DELETED |
| CI68 | CCMIN 6P8 50VK | DELETED | DELETED |
| DI33 | STRAP 0.6X4.5X12.5 | DELETED | STRAP 0.6X4.5X12.5 |
| DI34 | STRAP 0.6X4.5X12.5 | STRAP 0.6X4.5X12.5 | DELETED |
| DI60 | DIODE BA282 | DELETED | DELETED |
| LI61 | LA7X7 29.65MHz | DELETED | DELETED |
| QI01 | FILSW K2955M | FILSW G1962M | FILSW J1952M |
| QI31 | FILC 6.5MHz | DELETED | FILC 6MHz |
| QI32 | FILC 5.5MHz | FILC 5.5MHz | DELETED |
| QI33 | FILC 6.5MHz | DELETED | FILC 6MHz |
| QI34 | FILCTRP 5M74 | FILCTRP 5M74 | DELETED |
| RI04 | RCFMN 68R 0.1WJ | RCFMN 0 OHM | RCFMN 0 OHM |
| RI27 | RCFMN 68R 0.1WJ | RCFMN 56R 0.1WJ | RCFMN 56R 0.1WJ |
| RI60 | RCFMN 0R | DELETED | DELETED |
| RI62 | RCFMN 2K7R 0.1WJ | DELETED | DELETED |
| RI63 | RCFMN 150KR 0.1WJ | DELETED | DELETED |
| RI70 | RCFMN 2K7R 0.1WJ | DELETED | DELETED |
| RI71 | RCFMN 2K7R 0.1WJ | DELETED | DELETED |
| RI72 | RCFMN 3K9R 0.1WJ | DELETED | DELETED |
| TI02 | SMD BC848B | DELETED | DELETED |
| JA12 | STRAP 0.6X4.5X10 | DELETED | DELETED |
| JR39 | RCFMN 0 OHM | DELETED | DELETED |

## MICROPROCESSOR

| RF NORM / SOUND | L,AM | BG,FM5.5 | I,FM6.0 | DKK',FM6.5 |
|---|---|---|---|---|
| PIN 12 (BG TRAP) | 0 | 1 | 0 | 0 |
| PIN 31 (SOUND SW) | 1 | 1 | 0 | 1 |

## DIFFERENCE BEETWEEN MONO &ISTEREO 20" ( BGHILL')

;

| POS. | MONO | STEREO | POS. | MONO | STEREO | POS. | MONO | STEREO | POS. | MONO | STEREO |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BA03 | 2 WAY | DEL | CI70 | 33P | DEL | JA24 | 12.5MM | 10R0 | RI17 | DEL | 2K7 |
| BA05 | DEL | 7 WAY | CI71 | 1N | DEL | JA25 | 12.5MM | DEL | RI27 | 100R | 110R |
| BA06 | DEL | 9 WAY | | | | JA38 | DEL | 0R | RI32 | 1K | DEL |
| | | | | | | JI12 | 12.5MM | DEL | RI33 | 1K8 | DEL |
| CA02 | 470U | DEL | | | | JI13 | 12.5MM | DEL | RI35 | 4K7 | DEL |
| CA03 | 100N | DEL | | | | JI16 | 10MM | DEL | RI38 | 1K8 | DEL |
| CA04 | 1U | DEL | DA04 | BZX55B2V7 | DEL | JR22 | DEL | 0R | RI47 | 4K7 | DEL |
| CA05 | 22N | DEL | DA05 | BZX55B2V7 | DEL | JR35 | DEL | 0R | RR20 | 100R | DEL |
| CA06 | 22N | DEL | DI33 | E7296 | DEL | | | | RR72 | 1K8 | DEL |
| CA07 | 150P | DEL | DI34 | E7296 | DEL | LI04 | DEL | 22U | TA04 | BC848B | DEL |
| CA08 | 2N2 | DEL | | | | LI62 | 12U | DEL | TA05 | BC848B | DEL |
| CA09 | 150P | DEL | IR01 | ST9291J6B1 | ST92E91J7 | LI63 | 4U7 | 5U6 | TI30 | DTC144EK | DEL |
| CA13 | 47U | DEL | | | | | | | | | |
| CA14 | 220U | DEL | QI01 | G1965M | IFWG3965M | NA01 | IC-MONO | DEL | | | |
| CA15 | 47U | DEL | QI32 | 5.5MHz | DEL | | | | | | |
| CA16 | 220N | DEL | QI33 | 6MHZ | DEL | RA07 | 2K2 | DEL | | | |
| CA17 | 4N7 | DEL | | | | RA08 | 56K | DEL | | | |
| CA39 | 470U | DEL | | | | RA09 | 4K7 | DEL | | | |
| CI14 | 10U | DEL | JA01 | DEL | 0R | RA10 | 56K | DEL | | | |
| CI15 | 10U | DEL | JA04 | 0R | DEL | RA11 | 10K | DEL | | | |
| CI16 | 22U | DEL | JA07 | 10MM | DEL | RA21 | 150K | DEL | | | |
| CI17 | 22U | DEL | JA08 | DEL | 12.5MM | RA22 | 220K | DEL | | | |
| CI19 | 68N | DEL | JA10 | DEL | 10MM | RA23 | 2K7 | DEL | | | |
| CI22 | 1U | DEL | JA11 | DEL | 10MM | RA24 | 47R | DEL | | | |
| CI23 | CCCMIN 22N | RCFMN 0R | JA15 | 10MM | DEL | RA25 | 1R | DEL | | | |
| | | | JA17 | 0R | DEL | RA26 | 470R | DEL | | | |
| CI24 | 22N | DEL | JA20 | 12.5MM | DEL | RI12 | 5K6 | DEL | | | |
| CI31 | 33p | DEL | JA21 | DEL | 10MM | RI13 | 5K6 | DEL | | | |
| CI36 | 22N | DEL | JA22 | DEL | 10MM | RI14 | 220R | DEL | | | |
| CI37 | 22N | DEL | | | | RI15 | 100K | DEL | | | |

## ^BRAND

| | PIN9 | PIN8 |
|---|---|---|
| TELEFUNKEN | 0 | 1 |
| BRANDT /SABA / FERGUSON | 1 | 0 |
| THOMSON / NMD | 1 | 1 |

## ≠ CRT IC VERSION

| | 14" | 17" | 20" | 21" |
|---|---|---|---|---|
| RT06 | 62R | 62R | 220R | 220R |
| CT06, RT10 RT26, RT46 | TO BE DEFINE | | | |

## @ VOLTAGE FOR CRT

| 14" | 20" | 21" |
|---|---|---|
| 160V | 180V | 180V |

# COMPONENTS LOCATION - LOCALISATION DES ELEMENTS - LAGE DER BAUTEILE
# LOCALIZZAZIONE DEGLI ELEMENTI - LOCALIZACION DE LOS COMPONENTES

Solder side - Cote soudure - Lotseite - Lato saldatura - Lado soldaduras

| | |
|---|---|
| CA01 | G11 |
| CA05 | F11 |
| CA06 | G11 |
| CA07 | F11 |
| CA08 | F11 |
| CA09 | C11 |
| CA17 | AH |
| CA20 | E11 |
| CA21 | E11 |
| CC01 | A7 |
| CC02 | C7 |
| CC03 | C7 |
| CC10 | 06 |
| CC11 | C6 |
| CC12 | C5 |
| CC13 | D6 |
| CC14 | C6 |
| CC18 | D6 |
| CC19 | C7 |
| CC20 | D7 |
| CF01 | A3 |
| CF02 | A3 |
| CF11 | A4 |
| CF21 | A2 |
| CH03 | C9 |
| CMOS | B10 |
| CH09 | B9 |
| CH10 | A10 |
| CH14 | B10 |
| CH15 | B10 |
| CH16 | A10 |
| CH17 | A9 |
| CI01 | A8 |
| CI02 | A8 |
| CI03 | A8 |
| CI04 | A9 |
| CI05 | C10 |
| CI07 | D9 |
| CI08 | D9 |
| CI10 | E10 |
| CI13 | F10 |
| CI18 | D11 |
| CI19 | F9 |
| C123 | E9 |
| CI24 | F9 |
| CI25 | E9 |
| CI27 | E8 |
| CI28 | E8 |
| CI31 | F8 |
| CI33 | E9 |
| CI34 | E8 |
| CI36 | G8 |
| CI37 | F7 |
| CI38 | G10 |
| CI39 | G9 |
| CI52 | E8 |
| C153 | E7 |
| CI60 | D8 |
| CI62 | D9 |
| CI63 | D10 |
| CI64 | J11 |
| CI65 | D9 |
| C166 | D9 |
| CI67 | C10 |
| CI68 | 010 |
| CI69 | E9 |
| CI70 | 67 |
| CI71 | F8 |
| CK04 | L6 |
| CK05 | J9 |
| CK06 | L9 |
| CL02 | AO |
| CL14 | D4 |
| CL22 | C4 |
| CP07 | H3 |
| CP19 | G2 |
| CP23 | H2 |
| CP26 | H1 |
| CP28 | H1 |
| CP39 | EO |
| CR04 | H9 |
| CR05 | K9 |
| CR11 | J10 |
| CR12 | J9 |
| CR13 | J9 |
| CR14 | H8 |
| CR15 | H8 |
| CR16 | K8 |
| CR17 | J9 |
| CR19 | L10 |
| CR20 | K10 |
| CR21 | K10 |
| CR22 | K10 |
| CR24 | K7 |
| CR27 | J9 |
| CR28 | H9 |
| CR90 | J11 |
| CV03 | B7 |
| CV04 | C7 |
| CV05 | B8 |
| CV06 | B8 |
| CV07 | B8 |
| CV08 | F6 |
| CV09 | B5 |
| CV10 | B7 |
| CV11 | B7 |
| CV12 | B7 |
| CV15 | D7 |
| CV17 | C7 |
| CV18 | C7 |
| CV19 | C7 |
| CV20 | C7 |
| CV21 | B8 |
| CV22 | C8 |
| CV23 | C8 |
| CV24 | C7 |
| CV25 | C8 |
| CV27 | C7 |
| CV28 | C7 |
| CV30 | A5 |
| CV31 | A9 |
| CV34 | C4 |
| CV35 | B7 |
| CV40 | A5 |
| JA01 | E11 |
| JA04 | A8 |
| JA05 | A11 |
| JA06 | E11 |
| JA13 | A10 |
| JA17 | G10 |
| JA18 | H10 |
| JA38 | E11 |
| JC03 | B7 |
| JF01 | A4 |
| JF02 | B4 |
| JH02 | C9 |
| JH03 | B10 |
| JH09 | C9 |
| JI01 | D9 |
| J102 | D9 |
| JI04 | E10 |
| J105 | E8 |
| J106 | E10 |
| J108 | 08 |
| J109 | G9 |
| J115 | A9 |
| JI18 | A8 |
| J121 | D10 |
| J123 | F8 |
| J124 | F10 |
| J125 | F10 |
| J136 | F9 |
| J137 | F9 |
| JK08 | L10 |
| JK19 | L6 |
| JL04 | CO |
| JL12 | B3 |
| JL16 | A3 |
| JR01 | G6 |
| JR14 | K7 |
| JR18 | K11 |
| JR20 | H8 |
| JR21 | L7 |
| JR22 | H11 |
| JR23 | L7 |
| JR26 | J11 |
| JR27 | K8 |
| JR29 | K9 |
| JR30 | K9 |
| JR31 | J8 |
| JR34 | J11 |
| JR35 | K11 |
| JR36 | K11 |
| JR39 | J10 |
| JR42 | H11 |
| JR43 | H10 |
| JR45 | J8 |
| JR57 | K10 |
| JR58 | K10 |
| JR59 | K8 |
| JV02 | A5 |
| JV07 | A9 |
| JV40 | D5 |
| JV46 | E7 |
| RA01 | H11 |
| RA07 | F11 |
| RA08 | C11 |
| RA09 | G11 |
| RA10 | F11 |
| RA11 | G11 |
| RA20 | J11 |
| RA21 | E11 |
| RA22 | C11 |
| RA23 | B11 |
| RA24 | C10 |
| RA27 | H11 |
| RA37 | G11 |
| RA38 | G11 |
| RA39 | G10 |
| RC04 | D6 |
| RC05 | D5 |
| RC06 | C7 |
| RC07 | D7 |
| RC08 | D5 |
| RC20 | D7 |
| RC23 | D6 |
| RF06 | B5 |
| RF07 | C4 |
| RF08 | B4 |
| RF11 | A3 |
| RF12 | A3 |
| RF13 | A3 |
| RF15 | A4 |
| RF21 | A2 |
| RF22 | A2 |
| RF31 | C3 |
| RF32 | C4 |
| RF33 | C4 |
| RF34 | C4 |
| RF35 | C4 |
| RH04 | J8 |
| RH05 | J8 |
| RH06 | C9 |
| RH07 | B9 |
| RH09 | K7 |
| RH10 | J7 |
| RH13 | C9 |
| RH14 | B9 |
| RH15 | A9 |
| RI03 | C10 |
| R104 | D10 |
| RI05 | D9 |
| RI06 | D9 |
| RI07 | D9 |
| RI09 | D10 |
| RI10 | D10 |
| RI11 | E9 |
| RI12 | C10 |
| RI13 | C11 |
| RI15 | RIO |
| RI17 | D10 |
| R119 | D8 |
| RI20 | D9 |
| RI21 | D8 |
| RI22 | E9 |
| RI23 | D8 |
| RI24 | D8 |
| RI25 | E8 |
| RI27 | F8 |
| RI29 | F7 |
| RI30 | B7 |
| RI32 | F8 |
| R133 | F7 |
| RI34 | F8 |
| RI35 | G9 |
| R138 | F7 |
| RI40 | G9 |
| RI41 | G8 |
| R142 | G7 |
| RI43 | G7 |
| RI44 | B9 |
| RI45 | A8 |
| RI47 | G10 |
| RI50 | E9 |
| RI52 | E9 |
| R153 | D8 |
| R154 | D8 |
| RI55 | E8 |
| RI56 | E7 |
| RI57 | E7 |
| RI60 | D10 |
| RI62 | D10 |
| RI63 | D10 |
| R164 | E9 |
| R170 | H11 |
| RI71 | J11 |
| R172 | E9 |
| RI72 | J11 |
| RI74 | D8 |
| RK07 | K9 |
| RK08 | J9 |
| RK12 | L10 |
| RK13 | L10 |
| RL02 | BO |
| RL03 | AS |
| RL04 | A1 |
| RL21 | D4 |
| RL23 | D2 |
| RP08 | H3 |
| RP09 | G2 |
| RP11 | G2 |
| RP13 | H1 |
| RP18 | G1 |
| RP19 | G1 |
| RP23 | H2 |
| RR04 | K7 |
| RR05 | J6 |
| RR06 | J6 |
| RR07 | J8 |
| RR11 | J8 |
| RR12 | J8 |
| RR13 | J7 |
| RR15 | J7 |
| RR16 | J8 |
| RR18 | J10 |
| RR19 | J10 |
| RR23 | K9 |
| RR25 | H10 |
| RR26 | H10 |
| RR27 | L6 |
| RR29 | K8 |
| RR31 | K8 |
| RR32 | B8 |
| RR33 | K8 |
| RR34 | J10 |
| RR35 | J10 |
| RR36 | J10 |
| RR37 | E6 |
| RR38 | E6 |
| RR43 | J9 |
| RR44 | K10 |
| RR45 | J10 |
| RR46 | J10 |
| RR47 | F6 |
| RR49 | H8 |
| RR50 | H8 |
| RR51 | H9 |
| RR52 | H8 |
| RR54 | H8 |
| RR63 | K11 |
| RR64 | K11 |
| RR65 | K11 |
| RR66 | H8 |
| RR67 | H9 |
| RR69 | K8 |
| RR71 | J7 |
| RR72 | J9 |
| RR73 | J9 |
| RR74 | F7 |
| RR75 | J7 |
| RR78 | J10 |
| RR79 | J10 |
| RR80 | J10 |
| RR81 | J9 |
| RR83 | H8 |
| RR84 | H7 |
| RR85 | H8 |
| RR86 | H8 |
| RR87 | K8 |
| RV01 | C5 |
| RV05 | B8 |
| RV07 | B8 |
| RV09 | B8 |
| RV11 | A7 |
| RV15 | B6 |
| RV16 | B6 |
| RV17 | B6 |
| RV18 | B6 |
| RV21 | C7 |
| RV24 | C6 |
| RV25 | C5 |
| RV26 | C8 |
| RV28 | 06 |
| RV29 | 06 |
| RV30 | C8 |
| RV31 | E7 |
| RV35 | B6 |
| RV37 | F6 |
| RV38 | F6 |
| RV39 | F6 |
| RV40 | B5 |
| RV42 | F7 |
| TA01 | G11 |
| TA02 | H11 |
| TA04 | F11 |
| TA05 | G11 |
| TA06 | G11 |
| TF21 | A2 |
| TF31 | C4 |
| TH01 | K8 |
| TH02 | B9 |
| TH03 | B9 |
| TH04 | A9 |
| TI01 | E10 |
| TI02 | J11 |
| T103 | E10 |
| TI04 | E10 |
| T128 | E7 |
| T130 | G10 |
| TI31 | F8 |
| TI32 | G7 |
| TK02 | K10 |
| TR01 | K7 |
| TR02 | H8 |
| TV01 | F6 |
| TV02 | E6 |
| YA01 | G11 |
| YA03 | C11 |
| YA04 | C11 |
| YA05 | B11 |
| YA06 | B10 |
| YA07 | B10 |
| YC01 | A6 |
| YC02 | C6 |
| YC03 | 06 |
| YC04 | C8 |
| YC05 | C8 |
| YC06 | C6 |
| YC07 | C6 |
| TI-01 | AS |
| YF03 | A4 |
| YFOO | A4 |
| YF10 | B3 |
| YF12 | B4 |
| YI01 | C9 |
| YI03 | G10 |
| YI06 | J11 |
| YI07 | H9 |
| Y108 | F7 |
| Y109 | C10 |
| YI10 | D10 |
| YI11 | F7 |
| Y112 | F9 |
| Y113 | C9 |
| Y114 | E8 |
| YI15 | E10 |
| YL01 | A1 |
| YL02 | B1 |
| YL03 | CO |
| YL04 | CO |
| YL05 | C1 |
| YL06 | C1 |
| YL08 | C3 |
| YL09 | C4 |
| YL10 | D4 |
| YL11 | D4 |
| YP01 | J3 |
| YP02 | J1 |
| YP03 | J2 |
| YP04 | G1 |
| YP05 | HO |
| YP06 | GO |
| YP07 | 02 |
| YP08 | EO |
| YP09 | H6 |
| YR01 | G7 |
| YR02 | J9 |
| YR03 | J9 |
| YR04 | H9 |
| YR05 | J9 |
| YR06 | J9 |
| YR07 | H9 |
| YR08 | H9 |
| YR09 | J8 |
| YR10 | H9 |
| YR11 | K8 |
| YR12 | J6 |
| YR13 | H9 |
| YR14 | H9 |
| YR15 | J9 |
| YR16 | J8 |
| YR17 | J8 |
| YR18 | J8 |
| YR19 | J8 |
| YR20 | J8 |
| YV01 | C8 |
| YV02 | B6 |
| YV03 | B6 |
| YV04 | B6 |
| YV05 | B6 |

| | |
|---|---|
| **ABL** | AVARAGE BEAM LIMITATION<br>REGULATION DU SOURANT DE FAISCEAU |
| **AF** | AUDIO FREQUENCY<br>FREQUENCE AUDIO |
| **BCL** | BEAM CURRENT LIMITATION<br>LIMITATION DU COURANT DE FAISCEAU |
| **DEG. COIL** | DEGAUSSING COIL<br>BOBINE DE DEMAGNETISATION |
| **FB** | FAST BLANKING<br>COMMUTATION RAPIDE |
| H | HORIZONTAL DEFLECTION SIGNAL<br>SIGNAL DE COMMANDE BALAYAGE HORIZONTAL |
| **HTR** | HEATER<br>TENSION DE FILAMENT |
| **I CUT** | CUTOFF CURRENT<br>COURANT DE CUTOFF |
| **IP** | DATA FROM INFRARED RECEIVER<br>DONNEES ISSUES DU RECEPTEUR INFRAROUGE |
| **SCL** | SERIAL CLOCK<br>SIGNAL HORLOGE SERIE |
| **SDA** | SERIAL DATA<br>DONNEE SERIE |
| **SIF** | SOUND IF<br>FISON |
| **VAMP** | VERTICAL AMPLITUDE<br>AMPLITUDE VERTICALE |
| **V POS** | VERTICAL POSITION<br>POSITION VERTICALE , |
| **VT** | TUNING VOLTAGE<br>TENSION DU TUNER |
| -V | VERTICAL DEFLECTION SIGNAL<br>SIGNAL DE COMMANDE BALAYAGE VERTICAL |

# Ersatzteile • Spare parts list • Liste de pieces de rechange • Lista parti di ricambio Lista de piezas de recambio

**Wichtig:** Bei Ersatzteilbestellungen bitte unbedingt die entsprechende Bestellnummer angeben!
**N. B.:** When demanding Spare Parts it is absolutely necessary to quote the corresponding part number!
**Important:** Lors d'une commande de pieces de rechange, priere d'indiquer et tout cas le numero de la piece!
**Importante:** Ordinare sempre con il numero correspondenti di codice!
**Importante:** Pedir siempre los recambios con el numero correspondiente **codigo!**

| Pos. | Art.-Nr. Part No. | Bezeichnung | Part |
|---|---|---|---|
| | | MOOULE/AUSTAUSCHTEILE: | EXCHANGE PARTS: |
| MTM4045 | 202.413.WI | MTM4045 TUNER | MTM404S TUNER |
| | | CHASS1S-TE1LE | CHASSIS PARTS |
| BA01 | 231.0— | Siinnsf 2poitg. UP | 2 pin contact houaing |
| BE01 | 3m.6St.001 | ScartbuchrZlpoKg | Scan lockal |
| BT01 | 201.746.20 | BikjronrfHiung | Caitiod* ray tub* sockt |
| BT01 | 353.902.1000 | BildroDrlaxung | Camoda fy lub« lock*! |
| BT02 | 905.903.50 | Stittleiste lOpollg RD UF | Contxct strip 10-pol* |
| BV01 | 309.650.064 | Stitttiisr lOpoitg UF | Confct strki l0*pol« |
| BV02 | 905.903.50 | S(it11«rt* lOpolig RD UF | Conucl •trk} 10-pol* |
| BV03 | 309.650.092 | Stittl*iat*. 4polk) Ll*g*nd | ConUct lnip. 4-pol* |
| BX01 | 309.650.087 | Stlltl*isle, lQpoHg. Natuf U | Contact itrk). 10-pot* |
| CH12 | 490.006.0607 | 10NF 250V 20% Keramlk-Konden««tor | 10NP 250V 20% Ccap |
| CL04 | 101.B57.70 | ON3F 1K6V 3.5% Filmkond*ne«tor | 6N3F 1K6V 3.5% Film e«p |
| CL04 | 256.909 | 7N6F 1K6V 3,5% Filmkondwtof | 7N6F 1K6V 3.5% Film C«P |
| C1.04 | 490.007.6232 | 7NOF tK5V3.5\ Filmkondenselor | 7NOF 1K5V 3.5% Film Clp |
| CL05 | 309.433.766 | 390NF 250V 10% MKP-Kondenflor | 39CNF 250V 10% Fitm cap |
| CL05 | | | |
| CLIO | 266.243 | 330PF 1KV 10% Kenmik-Kondanutor | 33CPF 1KV 10% Cop |
| CL12 | 490 006.0607 | 10NF 250V 20% K»fmik-Kond»n»itor | 10NF 250V 20% Cctp |
| CL15 | 266243 | 330PF 1KV 10% Keremik-Konden—tor | 33CPF 1KV 10% C Clp |
| CL17 | 243879 | 330PF 400V 20% Kefamik-Kondensator | 330°F 400V 20% C cap |
| CL18 | 242272 | 680PF 2KV 10% K*ramik-Kond*ns*lor | 66CPF 2KV 10%C cap |
| CP01 | 252320 | OU1F 27SV20%MP-Kono*n—tor | OU1F 275V 20% MPoly cap |
| CP04 | 203.867.60 | 1NF 1KV 10% K*ramik-Kond*n»tor | 1NF 1KV 10% Ccap |
| CP05 | 309.442.972 | 1NSF 1KV K»famik-KondTT«tOf | 1N5F1KVCcap |
| CP06 | 309.440.660 | 1NF 1KV 50% KerTDik-Kondensator | 1NF KV 50% C cap |
| CP07 | 490.007.2242 | 100UF 400V Elko | 100UF 400V E cap |
| CP09 | 203.687.60 | 1NF 1KV 10% Ker«mik-Konden««tor | 1NF 1KV 10% C cap |
| CPU | 243.879 | 330PF 400V 20% K*r«mik-Kondenietor | 330PF 400V 20% Ccap |
| CP16 | 309.440.660 | 1NF 1KV 50% K*r«mik-Kondensii(or | 1NF 1KV 50% C cap |
| CP21 | 101.09960 | 4N7F 400V 20% Ker«mik-KondensHor | 4N7F 400V 20% C cap |
| CP21 | 309.951.997 | Schutzkappe P.CP21/49/50 | Profclion cap |
| CP29 | 490.006.0601 | 270PF 2KV 10% Kef-mik-Kondenstlof | 27CPF2KV10%Ccap |
| CP35 | 266.243 | 330PF 1KV 10% KerTHik-Konden—lor | 330PF 1KV 10% C cap |
| cpae | 309.419.426 | 150UF 200V Elto | 150UF 200V E cap |
| CP40 | 243.879 | 330PF 400V 20% K*r*mik-Kond*nutor | 330PF 400V 20% Ccap |
| CT03 | 140.360.20 | 2N2F 2KV 50% K*rimllrKond*n«*tor | 2N2P 2KV 50% C cap |
| CT82 | 246.746 | 2U2F 250V Elko | 2U2F 250V E cap |
| CT«4 | 238.221 | 10NF 250VAC 400V Kenmik-Kondensetof | 10NF C cap |
| CT85 | 309.442.978 | 1NF2KV20%KTBrnik-Kondensator | 1NF2KV20»CC«P |
| DA05 | 3M.12f.111 | BZX55B2V7 Z-DlOd* | BZX55B2V7 Z.Dioda |
| DC01 | 464.371 | ZPD5.1 Z-DkKf | 2PD5.1 Z-Olod* |
| DFOt | 309.325.951 | 1N4001 OiOd* | 1N4001 DlCKK |
| OF02 | 309.325.927 | 1N4148 Diode | 1N414»010<1« |
| OF21 | 309.325.927 | 1N4148 DiOd* | 1N4141 DioM |
| OF22 | 309.325.927 | 1N4148 OiOd* | 1N4148 Diod* |
| OH01 | 353.111.2001 | ZTK33C 1C | ZTK33C 1C |
| OK01 | 202.t85.20 | LTL-4263 OiOd* LED rot | LTL-4263 Dioca LED r«d |
| DK01 | 239.018 | Hairr. LED | LED liokll |
| OK03 | 202.985.20 | LTL-4263 DiOd* LEO rot | LTL-4283 Dioda LEO lad |
| MK03 | 203.820.60 | Hilfr LED | LED nokll |
| OL01 | 309.325.927 | 1N4146 Diod* | tN4i4goiod« |
| DL02 | 204.037.70 | BYT52G Diod* | BYT520 Olod* |
| DL04 | 204.037.70 | BYT52G DiOd* | B'rT52G Dioda |
| OLOS | 204.037.70 | BYT52G Diod* | BVT52G Oioda |
| DLM | 204.037.70 | 8YT52G OiOd* | BrT52Q Dloda |
| OL07 | 309.325.951 | 1N4001 DiOd* | 1N4001 Dloda |
| DLM | 309.325.951 | 1N4001 Olod* | 1N4001 Oloda |
| DL12 | 309.325.927 | 1N4148 Diode | 1N4146 Dloda |
| OL13 | 243.375 | BZX55B13V Z-Diode | B2X55813V Z-OK3da |
| DL20 | 309.325.927 | 1N414B Diod* | 1N4148D.OO* |
| 01.21 | 309.325.927 | 1N41480K)d* | 1N4146 Olod* |
| DL23 | 309.325,927 | 1N414a Otod* | 1N4148 Oioda |
| DP01 | 102.661.30 | M100M Oiod* | M100M *OWH* |
| DP02 | 102.661.30 | M100M Diod* | M100M Oloda |
| DP03 | 102-661.30 | M100M Diod* | M100U Dloda |
| DP04 | 102.661.30 | M100M DiOd« | M100U Dtoda |
| DP08 | 490.001,1567 | BYT11-600 Oiod* | BYT11-600 Oloda |
| DPW | 204.037.70 | BYTS2Q Diod* | BYT52G Dloda |
| OP07 | 204.037.70 | BYT52G Diod* | BYT52Q Olod* |
| DPO» | 204.037.70 | BYT920 Dtod* | BYT520 Diod* |

| Pos." | Art.-Nr. Part No. | Bezeichnung | Part |
|---|---|---|---|
| DP09 | 309.325.927 | 1N4141 DiOd* | 1N414«04od» |
| DP10 | 309.325.927 | 1N4146 0>0d« | 1N4148 Diode |
| DP11 | 309.325.951 | 1N4001 D>od« | 1N4001 Diode |
| DP12 | 309,325,951 | 1N4001 Diode | 1N4001 Diode |
| OP13 | 309.325 951 | 1N4001 Diode | 1N4001 Diode |
| DP20 | 490.007.6951 | BYT13-BOO Dtpd* | BYT13-800 Diod* |
| DP21 | 204.037.70 | BYT52G Diode | BYT52G Diode |
| DP21 | 490.006.0461 | PFR852 D.od« | PFR852 Diode |
| DP22 | 204.037.70 | BYT52G D.ode | 9YT52G Diode |
| DR04 | 464.358 | ZPD0.2 0.5W 2-Dlode | ZPD8.2 0.5W Z-OiOd* |
| OROS | 309325.927 | 1N4149 Diode | 1N4148 Diode |
| OR06 | 309.325.927 | 1N4146 OlOtf* | 1N4148 DiOd* |
| DTOt | 464.358 | ZPDB.2 0.5W Z-Olod* | ZPD8.20.5WZ-O.Od* |
| OT21 | 309.325.927 | 1N4148 Diode | 1N4148 Diode |
| OT22 | 309325.927 | 1N414B D«od« | 1N4148 Diode |
| DT23 | 464.879 | BAV21 Diode | BAV21 Diode |
| DT41 | 309.325-927 | 1N4148 Diode | 1N4148 Diode |
| DT42 | 309.325.927 | 1N414Q Diode | 1N4148 Diode |
| OT43 | 464.879 | BAV21 Diod* | BAV21 Diode |
| DT50 | 309.325 927 | 1N414aOode | 1N4148 Diode |
| OTS1 | 462.299 | BAV21 Diode | BAV21 Diode |
| OT52 | 309325.927 | 1N414B D'oda | 1N4148 Diode |
| DT60 | 309.325.927 | 1N4148 Diode | 1N4148 DiOd* |
| OT6) | 309.325.927 | tN4l4a Diode | 1N414B OiOd* |
| OT61 | 462.299 | SAV21 Diode | BAV21 Diode |
| OT62 | 309.325,927 | 1N414B Diode | 1N4148 Diode |
| DT63 | 464.679 | BAV21 Diode | BAV21 Diode |
| OT70 | 309.325.927 | 1N4148 Diode | tN4148 Diode |
| DT71 | 462.299 | BAV21 Diooe | BAV21 Diode |
| OT72 | 309.325.927 | 1N414B Dioda | 1N4148 Diode |
| DT65 | 464.358 | ZP08.2 0.5W Z-DlodW | ZPDB.2 0.5W Z-Dktd* |
| DT66 | 309.325,927 | 1N4148 Diod* | 1N4146 Diod* |
| DV01 | 309.325,927 | 1N4148 D>0d» | 1N4148 Diode |
| OV02 | 309.325.927 | 1N4148 Dioda | 1N4148 Diode |
| OV03 | 309.325927 | 1N414B Diode | 1N414B Diode |
| OV04 | 309.325,127 | BZX55B8V2Z-D>00* | BZX55B8V2 Z-Dlod* |
| 0X01 | 309.325.927 | 1N4148 Ood* | 1N4148 Diode |
| DX02 | 309.325.927 | 1N4148 Diode | 1N4148 D'oda |
| 0X03 | 309.325.927 | 1N414B Diofle | 1N414B Diode |
| 0X04 | 309 325-927 | 1N4148 D'OOfl | 1N4146 Diod* |
| FP01 | 309,627.506 | 1.6AT Sicherung | 1.6AT FUM |
| IA01 | 202.031.20 | TDA7253 1C | TOA725S 1C |
| IA01 | 202.992.40 | Morrfgectip | CHp |
| IC01 | 203.357.50 | TDA4685 1C | TDA4MS 1C |
| IF01 | 309 368,733 | TDA1771 1C | TDA1771 1C |
| 1F01 | 309.903.644 | Montagecltp | Clip m*t*l |
| 1101 | 201.eS2.80 | STV224A 1C | STV8224A 1C |
| IK01 | 101.324.10 | TFMK1330T 1C IR-Vorvrefrkf | TFMK1330T 1C |
| IP01 | 309.368549 | TEA2261 1C | TEA2261 1C |
| IR01 | 203.735,40 | ST9291J6B1 1C prog. o. S. | ST9291J6B1 1C |
| IB01 | 251.230,90 | ST9291J6B1 1C prog. m. S. | ST9291J6B1 1C |
| IR01 | 309.669966 | IC-Fllssung 42p0lig | (C socket 42pol* |
| IR02 | 309368734 | TDA81391C | TDA81391C |
| IR02 | 309.903.644 | Montageclip | Clip melal |
| IR03 | 243.022 | IC-Faasung flpolig | 1C socket 8pol* |
| IR03 | 490,008 0379 | X24C04 1C | X24C041C |
| 1T01 | 202.992.40 | Monltgecllp | CHp |
| IT01 | 309.36f.606 | TEA5101AIC | TEA5101A 1C |
| IV01 | 201.656.10 | STV21181C | STV21181C |
| IV01 | 309.669 966 | IC-Fassung 4;oo<tg | 1C socket42pol* |
| 1X01 | 203.061.50 | CF70204 1C | CF70204 1C |
| 1X02 | 203.061 60 | CP72306 IC | CF72306 1C |
| 1X03 | 309.368.470 | UA7805CSP/MC7605 1C | UA7B05CSP 1C |
| LH01 | 339349512 | 47UH Drosiel | 47UH RP choke coll |
| LH02 | 339349512 | 47UH Dfooel | 47UH RF choke coil |
| LI01 | 309.250 968 | OU56H Orotsei | OU56H RF choke 00)1 |
| LI03 | 266.716 | 22UM Oroasel | 22UH Choke |
| LI20 | 150.401.10 | 3U3H 10% Dros«*l | 3U3H 10% Chok*COil |
| LI29 | 203.109.30 | 38M9HZ Fillef LA7x7 | 38M9HZ Filter |
| LI62 | 004.710.3676 | 12UH 10% DfdifJ | 12UH 10% Choke coil |
| L163 | 130.206.00 | 5U6H 10% Orossel | 5U6H 10% Choke coil |
| LLOI | 243.866 | Tfeibertfnifofm.Hof | H-Drlvr transformer |
| LL03 | 309.249.377 | S8UH Spul*. H-Limritkt | 58UH H-Linearlty coll |

# Ersatzteile • Spare parts list • Liste de pieces de rechange • Lista parti di ricambio Lista de piezas de recambio

**Wichtig:** Bei Ersatzteilbestellungen bitte unbedingt die entsprechende Bestellnummer angeben!
**N. B.:** When demanding Spare Parts it is absolutely necessary to quote the corresponding part number!
**Important:** Lors d'une commande de pieces de rechange, priere d'indiquer et tout cas le numero de la piece!
**Importante:** Ordinare sempre con il numero correspondent! di codice!
**Importante:** Pedir siempre los recambios con el numero correspondiente **codigo!**

| Pos. | Art.-Nr. Part No. | Bezeichnung | Part |
|---|---|---|---|
| | | MODULE/AUSTAUSCHTEILE: | EXCHANGE PARTS: |
| MTM4045 | 202.483.90 | MTM4045 TUNER | MTM4045 TUNER |
| | | CHASS1S-TE1LE | CHASSIS PARTS |
| BA01 | 21>.OM | Stiftfrr ipoiig. UP | 2 pin contact Flouting |
| BE01 | 309«51 001 | Scartbkichse21polfg | Scan *ocke( |
| BT01 | 201.746.20 | Biklronrfassung | Cathode ray tub* sockt |
| BTOl | 353,902,1000 | Bildrohrlaaaung | Ca-noae riy tube >ock«l |
| BT02 | 905.903.50 | Simi*ist* IQpollfl RD UF | Conrct »trip 10-pol* |
| BV01 | 309.650.Oe4 | StilUeisle lOpollg UF | Contact itrip 10-por |
| BV02 | 90S.903.50 | Sfitllerte lOpolig RD UF | Confci •trip 10-pol* |
| BV03 | 309.950.092 | Stiltl*i*f. 4polig Uegend | Contact atrip, 4-pok« |
| 8X01 | 309.650.087 | Stifllelele. lOpohg. NaturU | Contact «trip, 10-pot< |
| CH12 | 490.008.0607 | 10NF 250V 20% K*ramik-Kond*naator | 10NF 250V 20% C cap |
| CL04 | 101.657.70 | 6N3F 1K6V 3,5% Filmkondenaator | 6N3F 1K6V 3,5% Film c»p |
| CL04 | 258.909 | 7N6F 1K6V 3.5% FilmkondenaatOf | 7N6F 1K6V 3.5% Film dp |
| CL04 | 490.007.8232 | | 7NOF 1K5V 3.5% Film cap |
| CL05 | 309.433.786 | 390NF 250V 10% MKP-Kond*n«ator | 39CNF250V 10%Fitmc«p |
| CL05 | 309433.775 | 470NF 250V 5% MKP-KondenaaiOf | 47CNP 250V 5% Capacitor |
| CLIO | | | |
| CL12 | 490008.0607 | 10NF 250V 20% Keramik-Kondensator | 10NF 250V 20% Ccap |
| CH5 | 266.243 | 330PF 1KV 10% Keramik-Kond*nutor | 33CPF 1KV 10% C cap |
| CL17 | 243 879 | 330PF 400V 20% Karamik-Kondensalor | 330PF 400V 20% C cap |
| ciia | 242.272 | 6BOPF 2KV 10% K*ramik-Kond*nsator | 66CPF 2KV 10% C cap |
| CPOl | 252.120 | OU1F 276V 20% MP-Kond*n—tor | OU'F 275V 20% MPoty cap |
| CP04 | 203.887.60 | 1NF 1KV 10% K*ramik-Kondenaator | 1NP 1KV 10% C cap |
| | | | 1N5P 1KV Ccap |
| CP06 | 309.440.680 | | |
| CP07 | 490,007.2242 | 100UF 400V Elho | 100UF 400V E cap |
| CP08 | 203.867.80 | 1NF 1KV 10% Kef«mik-Konden»«tOf | 1NF 1KV 10% C cap |
| CPU | 243.679 | 330PF 400V 20% Ker*(nik-Konden*alor | 330PF 400V 20% Ccap |
| CP16 | 309.440.660 | 1NF 1KV 50%Kefmtk-Kondenaator | 1NF 1KV 50% C cap |
| CP21 | 101.09980 | 4N7F 400V 20% Kefmik-Kondenattor | 4N7F 400V 20% Ccap |
| CP21 | | | Profctlon cap |
| CP29 | 490.008.0601 | 270PF 2KV 10% Kfamik-Kondansator | 27CPP2KV10%Ccap |
| CP35 | 266.243 | 330PF 1KV 10% K*ramik-Kond*naator | 330PP 1KV 10% C cap |
| CP36 | 309.419.428 | 150UP 200V Eiko | 1SOUF 200V E cap |
| CP40 | 243.679 | 330PF 400V 20% K*famik-Kond«n—tor | 330PP 400V 20% C cap |
| CT03 | 140.360.20 | 2N2F 2KV 50% Kftramik-KondTrator | 2N2F 2KV 50% Ccap |
| CT82 | 248.746 | 2U2F 250V Elko | 2U2F 250V E cap |
| CT84 | 23(221 | 10NF 250VAC 400V Keramik-Kondensator | 10NF C cap |
| CT85 | 309.442.978 | 1NF2KV20%Keramik-Kondenaator | 1NF2KV20»CC«p |
| DA05 | 31M.32i.UI | BZX55B2V7 ZCHod* | 8ZX5SB2V7 Z-Ooda |
| OC01 | 464371 | ZPD5.1 Z-Dtod* | ZPD5.1 Z-DlodW |
| DFOf | 309.325.951 | 1N4001 Diod* | 1N4001 Diod* |
| DF02 | 309-325.927 | 1N4148 DlOd* | 1N4148 Diod* |
| DF21 | 309.325,927 | 1N4148 Dod* | 1N4149 Oiod* |
| DF22 | 309.325.927 | 1N4148 Oiodtt | 1N4148 DlOd* |
| OH01 | 353.111.2001 | ZTK33C tC | ZTK33C 1C |
| DK01 | 202.9(6.20 | LTL-4263 Diode LED rot | LTL-4263 Diod* LEO r*d |
| DK01 | 239.018 | Halter. LED | LEO rroldw |
| DK03 | 202.966.20 | LTL-4263 Diod* LED rot | LTL-4263 Olod* LED r»d |
| MK03 | 203.820.60 | Halfr LEO | LEO holdw |
| DL01 | 309.325.927 | 1N41480iOd* | t N4148 Oiod* |
| DL02 | 204.037.70 | BYT52Q Diod* | BYTS2G Oiod* |
| DL04 | 204.037,70 | BYT52G Di0d» | BYTS2Q Diod* |
| DLOt | 204.037.70 | 8YT52G OlOd* | BYTS2G DiOd* |
| 0106 | 204.037.70 | BYT52G Diod* | B'<T52G DiOd* |
| DL07 | 309.325.951 | 1N4001 DiOd* | 1N4001 Diod* |
| DL06 | 309.325.951 | 1N4001 DiOd* | 1N4001 DiOd* |
| DL12 | 309,325.927 | 1N4148 Oioda | 1N4148 Diodtt |
| DL13 | 243.375 | BZX55B13VZ.Diod* | BZXSSB13VZ-Diod* |
| 01-20 | 309.325.927 | 1N414B Diode | 1N414B Diod* |
| OL21 | 309.325,927 | 1N4148 Diod* | 1N4146 Oiod* |
| DL23 | 309.325.927 | 1N4148 DtOd* | 1 N41480100* |
| DP01 | 102.661.30 | M100M DiOd* | M100M Dtod* |
| OP02 | 102.661.30 | M100M Oiod* | M100M Diod* |
| DP03 | 102,661-30 | M100M Diodt | M100M Dk)d* |
| DP04 | 102.661.30 | M100M Diodt | M100M Diode |
| OPO» | 490.001.1567 | BYT11-600 Olod4 | BYTI1-600 Dtod* |
| DPM | 204.037.70 | BYT52G Di0d« | BrT52G Oiod* |
| OP07 | 204.037.70 | 6YT52G Diod* | BYT52G Diod* |
| OPW | 204.037.70 | BYT52Q Oted* | BYTS2Q Diod* |

| Pos~ | Art.-Nr. Part No. | Bezeichnung | Part |
|---|---|---|---|
| DP09 | 30932S.927 | 1N4148 DiOd* | 1N4148D100* |
| DP10 | 309.325.927 | 1N4148 D'od* | 1N4148 Diod* |
| OP11 | 309.325 951 | 1N4001 D*0d» | 1N4001 Diode |
| OP12 | 309.325.951 | 1N4001 Diode | 1N4001 Diode |
| DPI3 | 309.325951 | 1N4001 DioOe | 1N4001 Diode |
| OP20 | 490.007.6951 | BYT13-800 Diod* | BYT13-800 Diod* |
| DP21 | 204.037.70 | BYT52G Diod* | BYT52G Diode |
| DP21 | 490.008.0461 | PFR852 Dioda | PFR852 Diode |
| OP22 | 204.037.70 | BYT52G DlOO* | BYT52G Diode |
| DR04 | 464.358 | ZPD8.2 0.5W Z-Diod* | ZPD8.2 0.5W Z-DiOd* |
| DB05 | 309.325.927 | 1N4148 Oiod* | 1N4148 Diod* |
| OR06 | 309.325.927 | 1N4148 OlOd* | 1N4148 Diode |
| DT01 | 464.358 | ZPD8.2 0,5W Z-OiOd* | ZPD8.2 0.5WZ-Oied* |
| OT21 | 309325.927 | 1N4148 D>0d* | 1N4148 Diod* |
| OT22 | 309,325.927 | 1N4148 D<0d* | 1N4148 Diode |
| DT23 | 464.879 | BAV21 D.od* | BAV21 Diode |
| DT41 | 309.325.927 | 1N4148 Diode | 1N4148 Diode |
| DT42 | 309.325.927 | 1N4148 Diod* | 1N4148 Diode |
| OT43 | 464.879 | BAV21 DiOd* | BAV21 Diode |
| DT50 | 309.325 927 | 1N4148 DiOd* | 1N4148 Diode |
| OT51 | 462.299 | BAV21 DiOd* | BAV21 Diode |
| DT52 | 309.325.927 | 1N4146 D<oda | 1N4148 Diode |
| DT60 | 309.325.927 | 1N4148 Diode | 1N4148 Diode |
| DT6< | 309.325.927 | 1N4148 OiOde | 1N4148 Diode |
| OT61 | 462.299 | 8AV21 Diode | BAV21 Diode |
| OT62 | 309.325.927 | 1N4146 Diode | 1N4148 Diode |
| DT63 | 464.679 | BAV21 Diod* | BAV21 Diode |
| DT70 | 309.325.927 | 1N4l480ode | 1N4148 Diode |
| OT71 | 462.299 | BAV21 Diode | BAV21 Diode |
| OT72 | 309.325.927 | 1N4148 Diode | 1N4148 Diode |
| DT85 | 464.358 | ZPD8.2 0.5W Z-Diod* | ZP09.20.5WZ-DtOd* |
| DT86 | 309.325.927 | 1N4148DlOd* | 1N4148 Diode |
| DV01 | 309.325.927 | 1N4148 Diode | 1N4148 Diode |
| DV02 | 309.325.927 | 1N4148 Diode | 1N4148 Diode |
| OV03 | 309.325.927 | 1N4148 Diode | 1N4148 DiOde |
| DV04 | 309.325.127 | BZX5568V; Z.D.od* | BZX55B8V2 2-Dode |
| 0X01 | 309.325-927 | 1N4148D.ode | 1N4148 Diode |
| 0X02 | 309.325.927 | 1N4148 Diode | 1N4148 Diode |
| 0X03 | 309.325 927 | 1N4148 DioOe | 1N4148 Diode |
| 0X04 | 309.325-927 | 1N4148 Diode | 1N4146 Diode |
| FP01 | 309627.508 | 1.6AT SchTung | 1.6ATFuee |
| IA01 | 202.031.20 | TDA72531C | TDA72S31C |
| IA01 | 202.992.40 | Monlageclip | CHp |
| IC01 | 203.357.50 | TDA46651C | TOA46651C |
| IF01 | 309 368.733 | TDA1771 1C | TOA177t 1C |
| IF01 | 309.903.844 | Montag*clip | Clip mfl |
| 1101 | 201.ef2.10 | STVB224A 1C | STVB224A 1C |
| IK01 | 101.324.10 | TFMK1330T 1C IH-VorvratBrker | TFMK1330T 1C |
| IP01 | 309.368.549 | TEA22611C | TEA22611C |
| IR01 | 203.735.40 | ST9291J6B1 1C prog.0. S. | ST9291J6B1 1C |
| IROt | 251.230.90 | ST9291J6B1 1C prog. m. S. | ST9291J6B1 1C |
| IR01 | 309.689 966 | IC-Fassung 42oolig | (C socket 42pol* |
| IR02 | 309.368 734 | TDA81391C | TDA81391C |
| IR02 | 309.903.844 | Montageclip | Clip metal |
| IR03 | 243.022 | IC-Fassung Bpolig | 1C socket 8pol* |
| IR03 | 490.0080379 | X24C041C | X24C041C |
| IT01 | 202.992.40 | Monlageclip | Clip |
| IT01 | 309368606 | TEA5101AIC | TEA5101A |C |
| IV01 | 201 658 10 | STV21181C | STV21181C |
| IV01 | 309.689 966 | IC-Fassung 42ooltg | 1C socket42por |
| 1X01 | 203.061.50 | CP70204 1C | CF70204 1C |
| 1X02 | 203.061.60 | CP72306 1C | CF72306 1C |
| 1X03 | 309.368.470 | UA7805CSP/MC7M5 1C | UA760SCSP 1C |
| LM01 | 339.349.512 | 47UH Dro*—l | 47UH RF chok* COll |
| LH02 | 339 349 512 | 47UH DfOtael | 47UH RF Chok* COil |
| LI01 | 309.250 988 | 0(J56H Drossef | OU56H RF chok* 60U |
| LI03 | 266716 | 22UH Diossel | 22UM Choke |
| L120 | 150,401-10 | 3U3H 10% Dror*l | 3U3H 10% Chok* coil |
| LI29 | 203.109.30 | 36U9HZ Filfr LA7l7 | 38M9HZ Fi«*r |
| L162 | 004.710.3876 | 12UH 10% Drosa*) | 12UH 10%Cfiok* coil |
| L163 | 130.206.00 | SU6H 10% Drosael | 5U6H 10% Chok* coil |
| LL01 | 243.888 | Treibertranxformator | M-Driver transformer |
| 11.03 | 309.249.377 | 5BUH SDul*. H-Lirrarift | 58UH H-Lineafiiy colt |

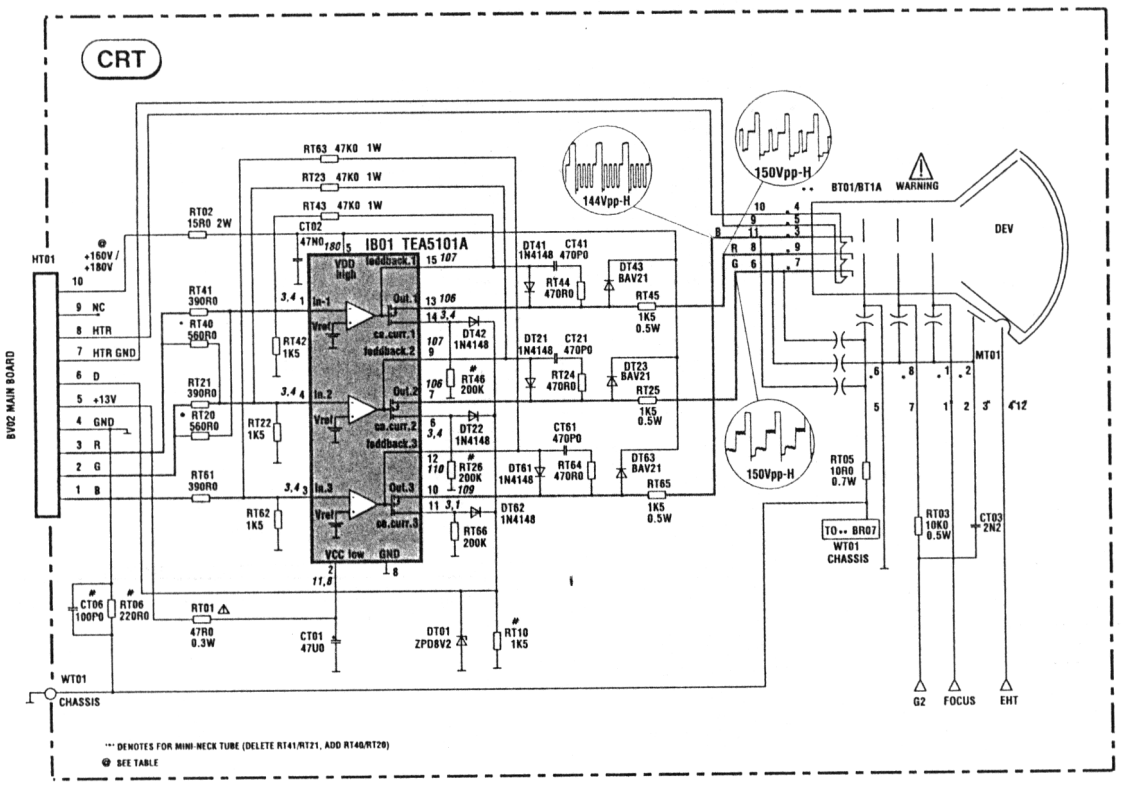
# Ersatzteile • Spare parts list • Liste de pieces de rechange • Lista parti di ricambio Lista de piezas de recambio

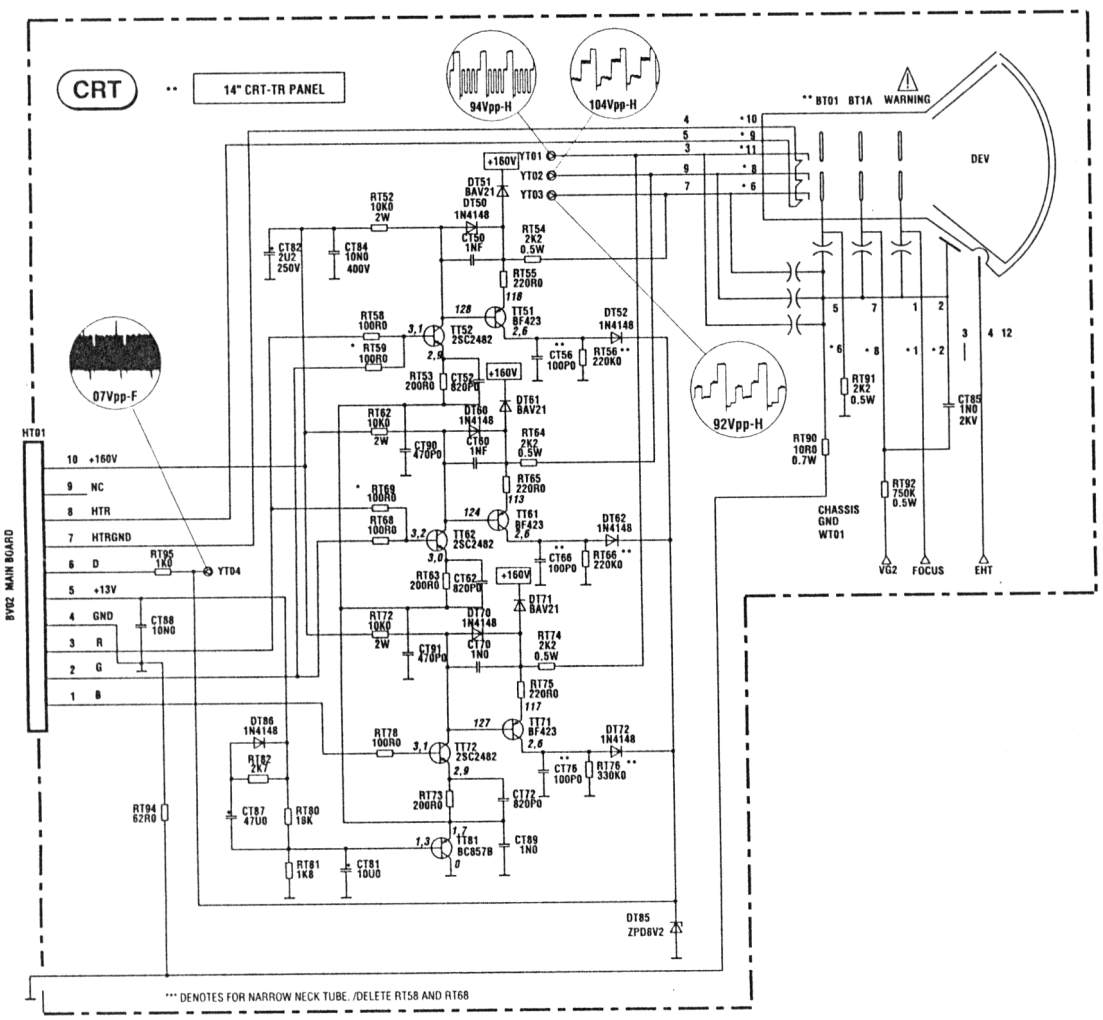
Wichtig: Bei Ersatzteilbestellungen bitte unbedingt die entsprechende Bestellnummer angeben!
**N. B.:** When demanding Spare Parts it is absolutely necessary to quote the corresponding part number!
**Important:** Lors d'une commande de pieces de rechange, priere d'indiquer et tout cas le numero de la piece!
**Importante:** Ordinare sempre con il numero correspondenti di codice!
**Importante:** Pedir siempre los recambios con el numero correspondiente codigo!

| Pos. | Art.-Nr. Part No. | Bezeichnung | Part |
|---|---|---|---|
| LL03 | 490.007.8459 | 90UH Spule H-Llrwahtt | SOUM H-Linearity coil |
| LL04 | 309.250984 | 50UH15%Oroifrl | 50UH 15% Choke |
| LL05 | 20202880 ! | Diodenaplil-Tralo TX91 14' FCV-1410E18 | Diode split transtoffTTf |
| LL05 | 203.832 80 * | OtOdeflsplil-Tfafo TX91 20* | Diodfli split traniforiTiM |
| LLOS | 251.233.40 5 | D>od»nsplH.TrafoTX91 20' FCV-2010E07 | Diod* split Irinsformw |
| LPO) | 339 349.566 ! | 2X4QOUH NBtzeingangUro——l | 2X400UH Poww chok« |
| LP02 | 203 979.40 | 30MH Siebarossel | 30MH Piller choke |
| LP02 | 490.0060542 | 33MOH Siftbdrossel | Pilfr choke |
| LP03 | 203774.10 S | Trafo Schaltnetzfi) | Swiicfifld mode power (rinxformw |
| LP03 | 203.t25.90 E | Trafo SchaHnetzteil ETS42A2-116ND | Switcrfd 'nod* power tfinitomw |
| LP04 | 203.264 60 | 2U2H 10% Drossel | 2U2H tO%Chok«coil |
| LPO* | 203.264 50 | 4UH 10% Orossel | 4UH 10%Chokacoil |
| LPW | 203.264.50 | 4UH 10% Drossol | 4UH 10% Choke coil |
| LP01 | 150397.50 | 15UH 10% Orossel | 1SUH 10% Choke coil |
| LR01 | 266406 | 10UM Droeiwt | IOUHChokccoU |
| MTO) | 402.0t2.00 | Clneh BucttM | Clneh •ockt |
| P101 | 203.S13.20 | 10KR 30% Tnmmwider»tand (legend | 10KR 30% Trimmer r—iator |
| PP01 | 309 S09.204 | 470R Tnmmwiderstand. liegend | 470R Trimmer reirtor |
| OC01 | 100.877.10 | 4M433616HZQuirz | 4M433G19HZ Crystal |
| QC02 | 100.877.20 | 3M579545HZQuarz | 3M579545HZ Crysfl |
| 0101 | 404.03749 | OFWG1962M Obertlachenwirnfilter | Surfac* •eouilic wv tilfr |
| 0132 | 278.341 | SFT5.SMA KeramikftHer | SFTS.6MA Cenmic lilfr |
| 0114 | 203.381.70 | 70KHZ Kenmiklilter Trap | 70KHZ Certmic filter trip |
| QR01 | 3C9.335.731 | BMOHZ Quarz | 8MOHZ Crytial |
| QV01 | 309.180.840 | CSB503B Keramikfllfr | CS95039 CTtmic mif |
| QXOt | 261.323 | 13M875HZ Quarz | 13M875HZCfyst»l |
| RA25 | 339 537.717 | 1R 0.3W 5% Sicnerneltswiderstand | 1 R 0,3W 5% Fusible resistor |
| RA21 | 246.a0e S | 470R 0.3W 5% Scherheitswidersiand | 470R 0.3W 5% FusiDle resistor |
| RF01 | 1SO.OM.70 ! | 2R2 0.3W S% SIcherheifwldarafnd | 2R2 0.3W 5% Fu»ibli resistor |
| RF04 | 150.144.10 | 22R 0.4W 2% MelaMfilmwiderstand | 22R0.4W2%Mefl litm rauxtor |
| RHie | 339.537.717 ; | 1R 0.3W 5% Sichemeitswider stand | 1R 0.3W 5% Fusible resistor |
| RM17 | 253.747 S | 5R6 0.3W 5% Sicherheitawiderstand | 5R6 0,3W 5% Fusible resistor |
| BL01 | 130.838.20 | 390R 1W 5% Metalloxydwidersland | 390R 1W 5% Mfttal oxide resistor |
| RL07 | 309 580.952 | 1KR 0.5W 10% Sicherheilswidersiand | 1KR 0.5W 10% Fusible resistor |
| RL08 | 101513.20 | ieR 2W 5% Metalloxidwtderstand | 1 BR 2W 5% Oxide metal resistor |
| RLM | 309 536 942 | 33R tW 5% Melalloxydwiderstand | 33R 1W 5% Men oxida resistor |
| RLO« | 490 006 7871 | 33R 2W 5% Metalloxydwiderstand | 33R 2W 5% Metal oxide reaislOf |
| RLM | 203521.70 | 8R2 5W 10% Drahtwid erst and | 8R25W10%Wiferes.slof |
| RL11 | | | 15R 0.5W 5% Fusible resistor |
| RL12 | 103,131,10 S | OR560 0.5W 5% Sicherheitswiderstand | OR560 0.5W 5% Fusible resistor |
| RL13 | 103.054.50 ; | OR220 0.5W 5% Sicherheitswiderstand | OR220 0.5W 5% Fusible resistor |
| RL13 | 103.131.10 S | OR560 0.5W 5% Sicherheitswiderstand | OR560 0.5W 5% Fusibf restsior |
| RL13 | 243743 S | 1R5 0.5W 5% Sicherheilswiderstand | 1R5 0,5W 5% Fusible resistor |
| RL22 | 103.321.70 | 75KR 1W 5% Metalloxydwiderstand | 75KR 1W 5% Metal oxide resistor |
| RL22 | | | 82KR 1W 5% Metal oxide resistor |
| RP01 | 203.696.40 | 5R1 5W 10% Drshlwid er stand | 5R1 5W 10% Wire resistor |
| RP02 | 110.651.00 S | 25R 220V PTC-Wlderstand | 25R 220V PTC resistor |
| RP03 | 203 102.40 | 1K 7W 5% Drahtwiderstand | 1K7W 5% Wire resistor |
| RP06 | 2C3.695.90 | 18KR5W5%Mtlatlorydwidarstand | 18KR 5W 5% Metal oxida resistor |
| RP07 | 41344301 | 4K75 0.25W 1% Metallfilmwiderstand | 4K75 0.25W 1% Melal film resistor |
| RP10 | 204 704 60 | 33R 3W 5% MelalloxydwidTstand | 33R 3W 5% Mefl oxide resistor |
| RP20 | 130.498.80 | OR220 3W 5% Melalltilmwidersiand | OR220 3W 5% Meial film resistor |
| RP20 | 130.85530 | OR270 3W 5% Metallfilmwiderstand | OR270 3W 5% Metal film r«s>s1or |
| RP21 | 309 530 716 | TOM 0.7W 5% Schichtwider aland | 10M 0.7W 5% Film resistor |
| RP31 | 103.0S4.50 S | OR220 0.5W 5% Sicherheitswiderstand | OR220 0.5W 5% Fusible resistor |
| RP31 | 243903 S | OR22 0.5W 5% Sicherheitswiderstand | OR22 0.5W 5% Fusible resistor |
| HP32 | 103054,50 R | | |
| RP32 | 243 903 S | OR22 0.5W 5% Sk:hflrhe«tsw»dersiand | OR22 0.5W 5% Fusible resistor |
| RR01 | 100.37t.00 3 | BR2 0.5W 5% Sich-hellswidTStand | 8R2 O.SW 5% Fusible resistor |

| Pos. | Art.-Nr. Part No. | Bezeichnung | Part |
|---|---|---|---|
| RT01 | 253.081 S | 47R 0.3W StCherh cits wider stand | 47R 0.3W Fusible resistor |
| RT02 | 130.013.50 | 15R 2W 5% Meftloxydwiderstand | 15R 2W 5% Motal oxide resistor |
| RT03 | 404.349.80 | 10K0.5W5%W«afsiano | 10K 0.5W 5% Resistor agglom. |
| RT23 | 101.337.80 | | |
| RT25 | 101.218.80 | 1K5R 0.5W 5% Widersfnd | 1K5R 0.5W 5% Resisior affllom. |
| RT43 | 101.337.60 | | |
| RT45 | 101.218.80 | 1K5R 0.5W 5% Widersund | 1K5R 0.5W 5% Resistor aoglom. |
| RT52 | 490007.8228 | 10KR2W 10% Meiailoxyaw.dersfnd | 10KR 2W 10% Metal oxide resistor |
| RT62 | 490 007.8228 | 10KR2W 10% MeflloxydwidefSiand | 10KR 2W 10% Melal oxide resistor |
| RT63 | 101-337,80 | 47KR 1W 5% M«flkixy0w>derstand | 47KR iw 5% Metal oxide resistor |
| RT65 | 101.218.80 | 1K5R0.5W5% Widerstand | 1K5R 0.5W 5% Resistor agglom. |
| RT72 | 490.007.8228 | 10KR2W10%Meuiloxydwidersiand | 10KR 2W 10% Metal oxide resisior |
| RV02 | 258863 S | | |
| RV41 | 150.099.70 S | 3R9 0.3W 5% SicherheilswtdTslend | 3R9 0.3W 5% Fusible resistor |
| RX01 | 309.580 955 : | 22R 0.3W 5% Storwh^ttwidJntend | 22R Q.3W B« Fuaible resltor |
| SK01 | 105.106.00 | TaKtschaner | Tact twitch |
| SK01 | 404.474.1A | Taxtschalter | Tact switch |
| SK02 | 105,106,00 | Taktscmier | Tact switch |
| | | | Tact switch |
| SK03 | 105.106.00 | Taktscha'ier | Tad switch |
| SK03 | 404.474.1A | Taktscmier | Tad twitch |
| SK04 | 105.106.00 | Taktecheirr | Tact twitch |
| SK04 | 404.474.1A | Takischalter | Taci switch |
| SKOS | 101.759.10 S | Neizscnalter | Mama switch |
| SKOS | 201.260.10 S | Netzschaltef. 4A 250V | Main« switch |
| TA05 | 339.555.241 | BC9488 Transistor SMD | BC848B Transistor |
| TAOC | 339555.241 | BC848B Transistor SMD | BC848B Tranaiator |
| TP21 | 339.555241 | BCS4BB Tranartor SMD | BCa4BB Transielor |
| TF31 | 102.762.40 | 8C&4BA Transistor | BCB4BA Transistor |
| TF31 | 339.5S5.24t | BC&48B Trarritor SMO | BC648B Transistor |
| TH01 | 249.0(3 | BC647B Transioior SMO | BC847B Transistor |
| TH02 | 242.012 | BC658/C Trensistor SMD | BC85a/C Transistor |
| TH03 | 242.012 | BC858/C Tranaislor SMO | BC858/C Transistor |
| TH04 | 242.012 | BCa56/C Transistor SMD | BC858/C Transistor |
| T101 | 242857 | MMBTHIOLTI Transftor SMO | MMBTHIOLTI TransHtOf |
| T131 | 249.250 | BC858B Transistor SMO | BC858B Transiator |
| T132 | 339.555.241 | BC848B Transistor SMD | BC8488 Transistor |
| TK02 | 33t.SS5.241 | BCB48B Truulfor SMD | RC8488 Tnin—ur |
| TL01 | 339.556.787 | BC337-40 Tranarlor | BC337-40 TranaCtor |
| TL02 | 261.825 | Montageclip 1 | Clipl |
| TL02 | 309.005.026 | S2055AF Tren»l»tor | S2055AF Transistor |
| TL13 | 339 556.767 | BC337-40 Tranaistor | BC337-40 Transistor |
| TP01 | 102.067.60 | BUL310XI Trenslfttof | BUL310XI Transistor |
| TP01 | 281.825 | Montageclip 1 | Cllpl t |
| TR01 | 339.555.241 | BC848B Transistor SMD | BC848B Transistor |
| TR08 | 339.555.241 | BC648B Transistor SMD | BC846B Transistor |
| TR03 | 339.555.241 | BC848B Transistor SMO | BC848B Tranaiator |
| TT51 | 309.001.310 | BF423 Transisior | BF423 Translator |
| TT52 | 160 037.60 | 2SC2482N Transistor | 2SC2482N Transistor |
| TT61 | 309001.310 | BF423 Transistor | |
| TT62 | 160.037.60 | 2SC2482N Transistor | 2SC2482N Transistor |
| TT7] | 309.001.310 | BF423 Transistor | 8P423 Transistor |
| TT72 | 160,037.60 | 2SC2482N Transistor | 2SC2482N Transistor |
| TT81 | 352.875.5000 | BC857B Trannitor SMO | BC857B Transistor |
| TV01 | 249.250 | BC858B Trannxtof SMD | BC858B Tran«»lor |
| TV02 | 249250 | BC858B Tran—tor SMO | BC8S8B Tr.nsrlor |
| TX01 | 309001 228 | BC558B Transitor | BC5SBB Transistor |
| | 103.381.90 | Laitung mrt Sleeker lOpolig 420mm Chassis BV82 an CRT HT81 | Cable with socket 10-pol* 420mm |

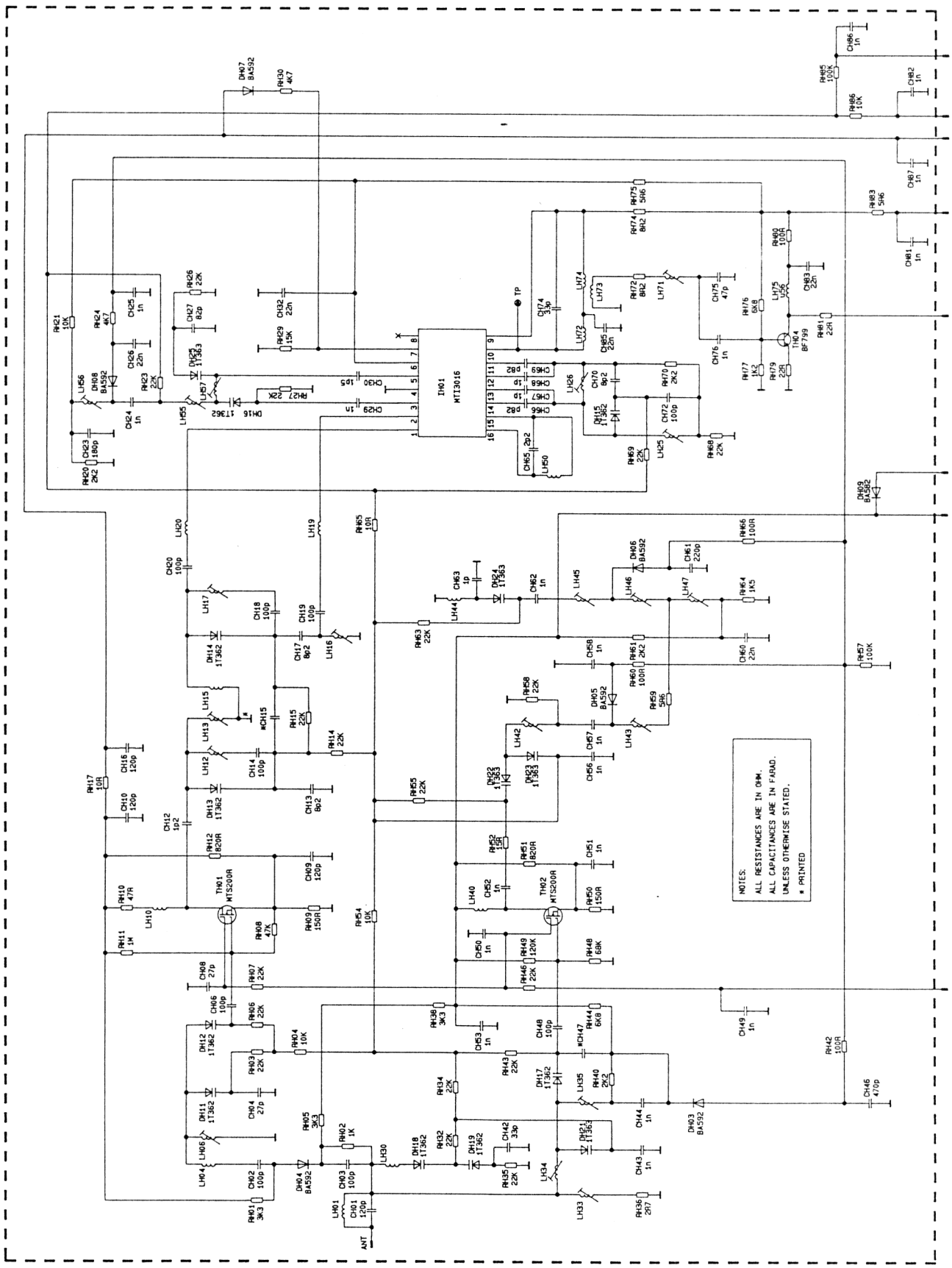
# VIDEO AMPLIFIER - AMPLIFICATEURS VIDEO - VIDEOVERSTÄRKER
# AMPLIFICATORE VIDEO - AMPLIFICADOR VIDEO




TX91

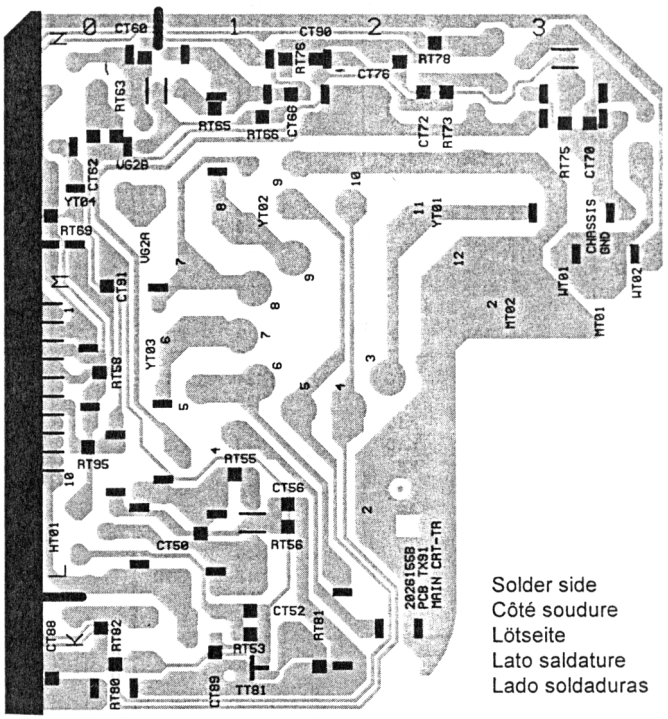
# VHF / UHF TUNER MTM 4045

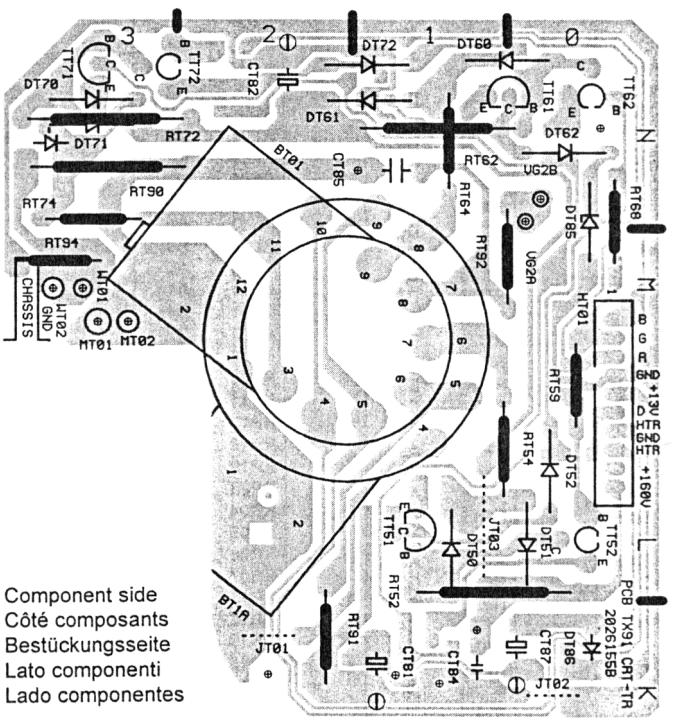



(For information only)

## VIDEO AMPLIFIER BOARD - PLATINE AMPLIFICATEURS VIDEO - VIDEOVERSTÄRKERPLATTE
## PIASTRA AMPLIFICATORE VIDEO - PLATINA AMPLIFICADOR VIDEO

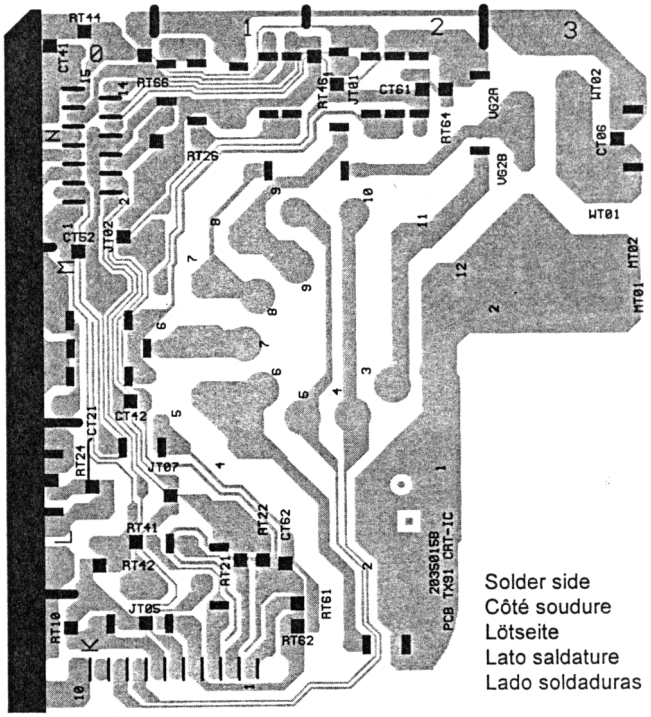
- TRANSISTOR VERSION -

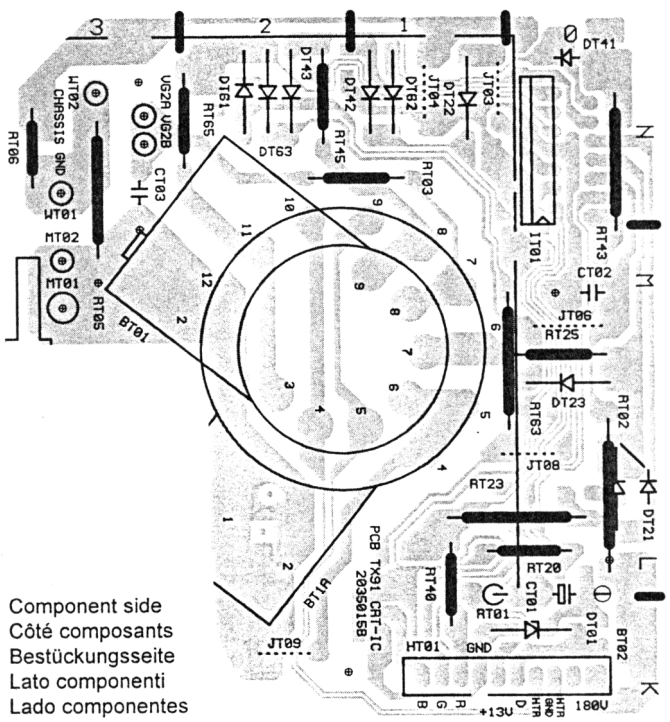


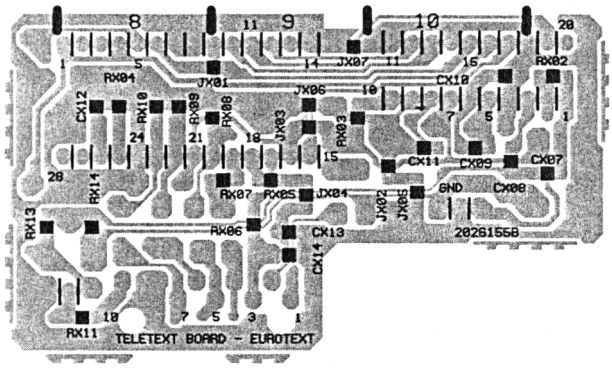
## VIDEO AMPLIFIER BOARD - PLATINE AMPLIFICATEURS VIDEO - VIDEOVERSTÄRKERPLATTE
## PIASTRA AMPLIFICATORE VIDEO - PLATINA AMPLIFICADOR VIDEO

- IC VERSION -

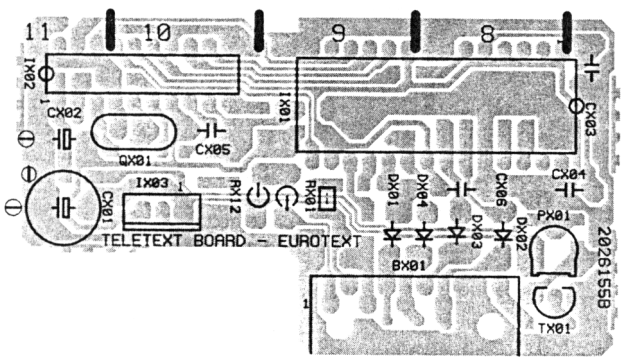


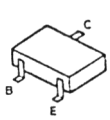
# TELETEXT MODULE - MODULE TELETEXTE - VIDEOTEXT MODUL
# MODULO TELEVIDEO - MODULO TELETEXTO




Solder side
Côté soudure
Lötseite
Lato saldature
Lado soldaduras




Component side
Côté composants
Bestückungsseite
Lato componenti
Lado componentes

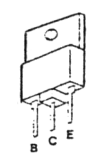



BC 847 B
BC 848 A /B /C
BC 857 B
BC 858 B /C
DTC 144 EK
MMBTH10L

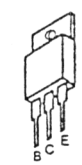
BF 423

2 SC 2482

BC 337
BC 558 B

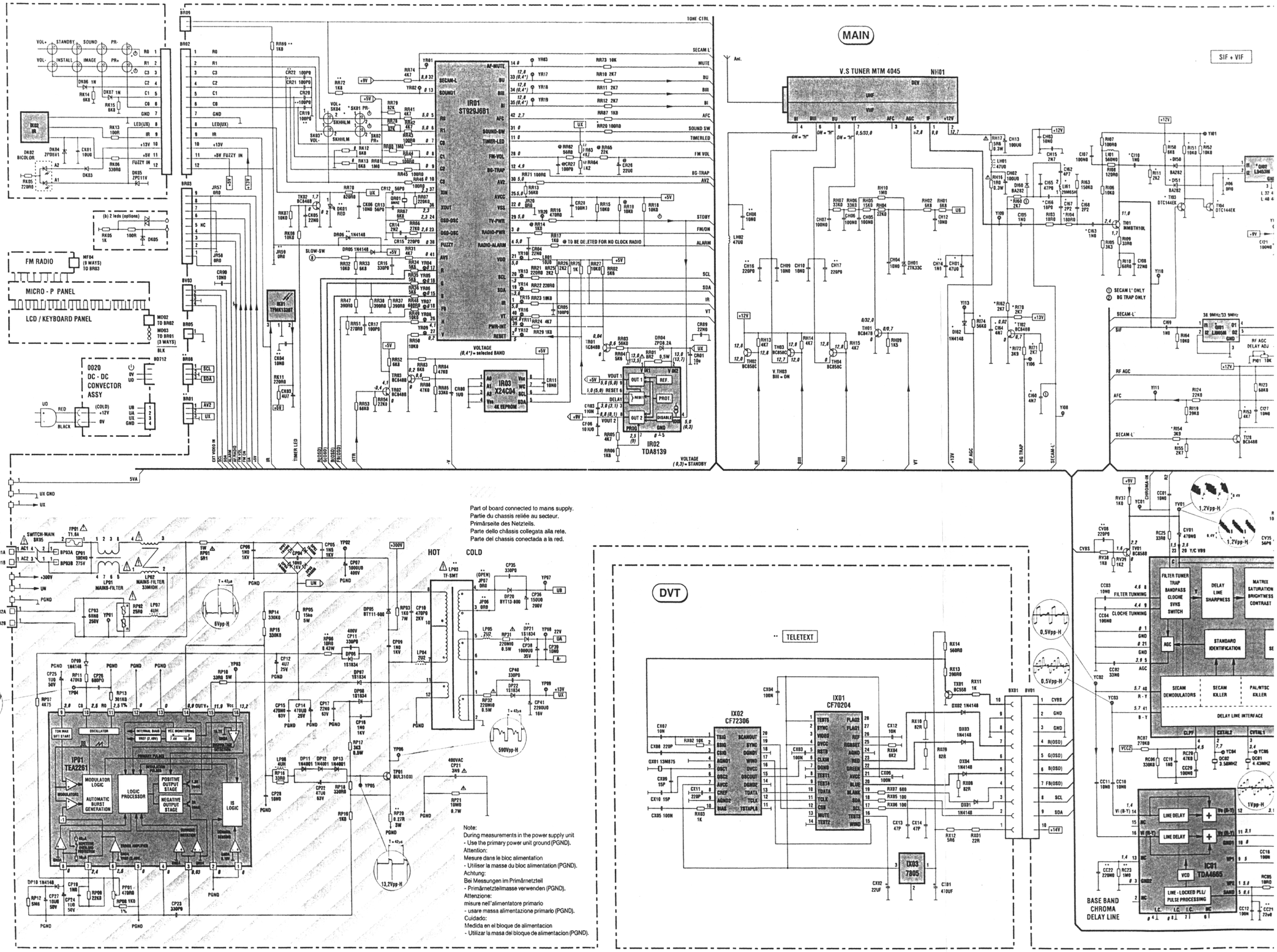


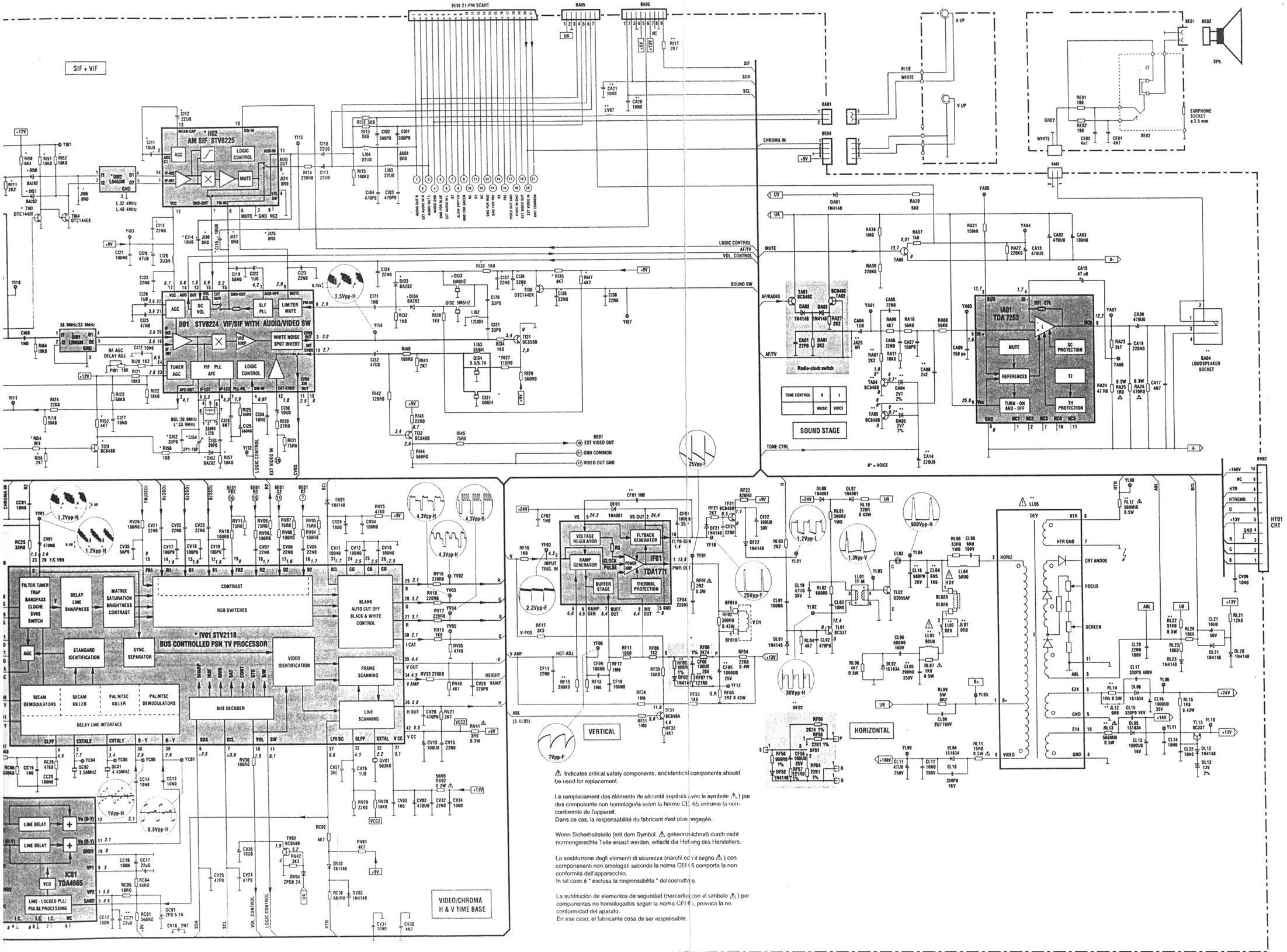

BUL 310 XI




S 2055 AF

# MAIN SCHEMATIC DIAGRAM - SCHEMA PLATINE PRINCIPALE - CHASSIS GRUNDPLATTE SCHALTBILD - SCHEMA PIASTRA PRINCIPALE - ESQUEMA PLATINA PRINCIPAL






⚠ Indicates critical safety components, and identical components should be used for replacement.

Le remplacement des éléments de sécurité (repérés avec le symbole ⚠) par des composants non homologués selon la Norme CEI 65 entraine la non-conformité de l'appareil.
Dans ce cas, la responsabilité du fabricant n'est plus engagée.

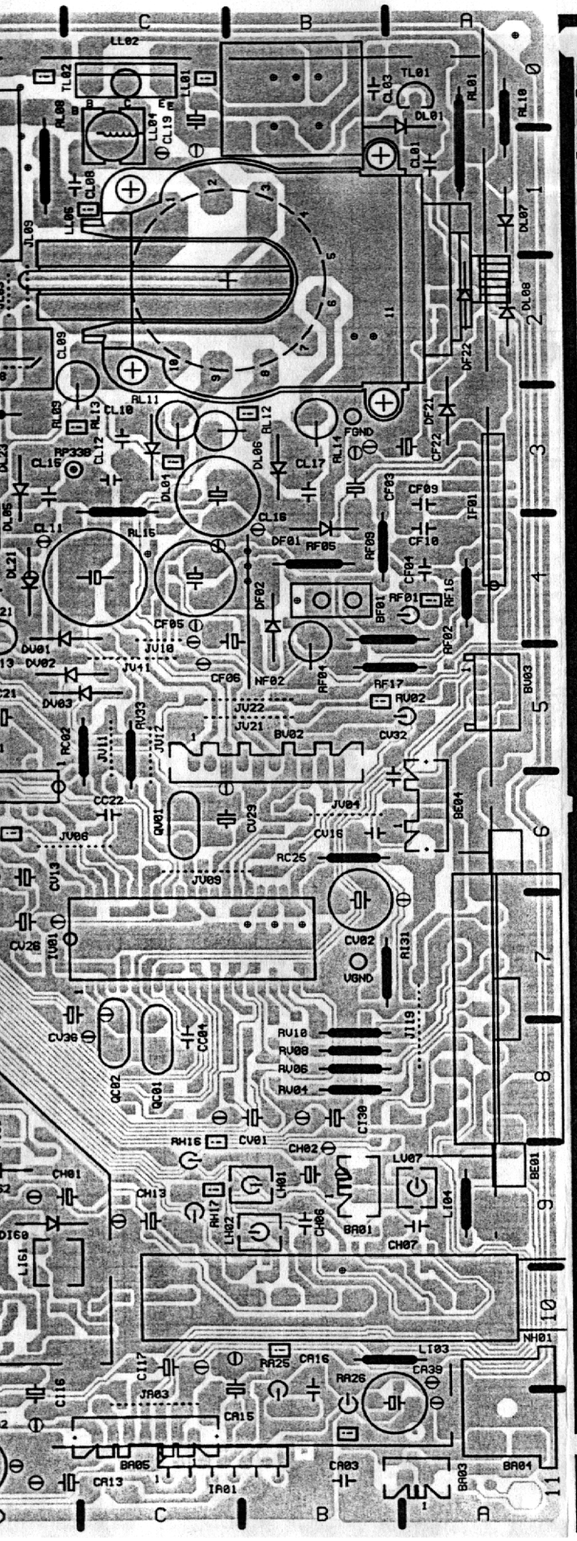
Wenn Sicherheitsteile (mit dem Symbol ⚠ gekennzeichnet) durch nicht normengerechte Teile ersetzt werden, erlischt die Haftung des Herstellers.

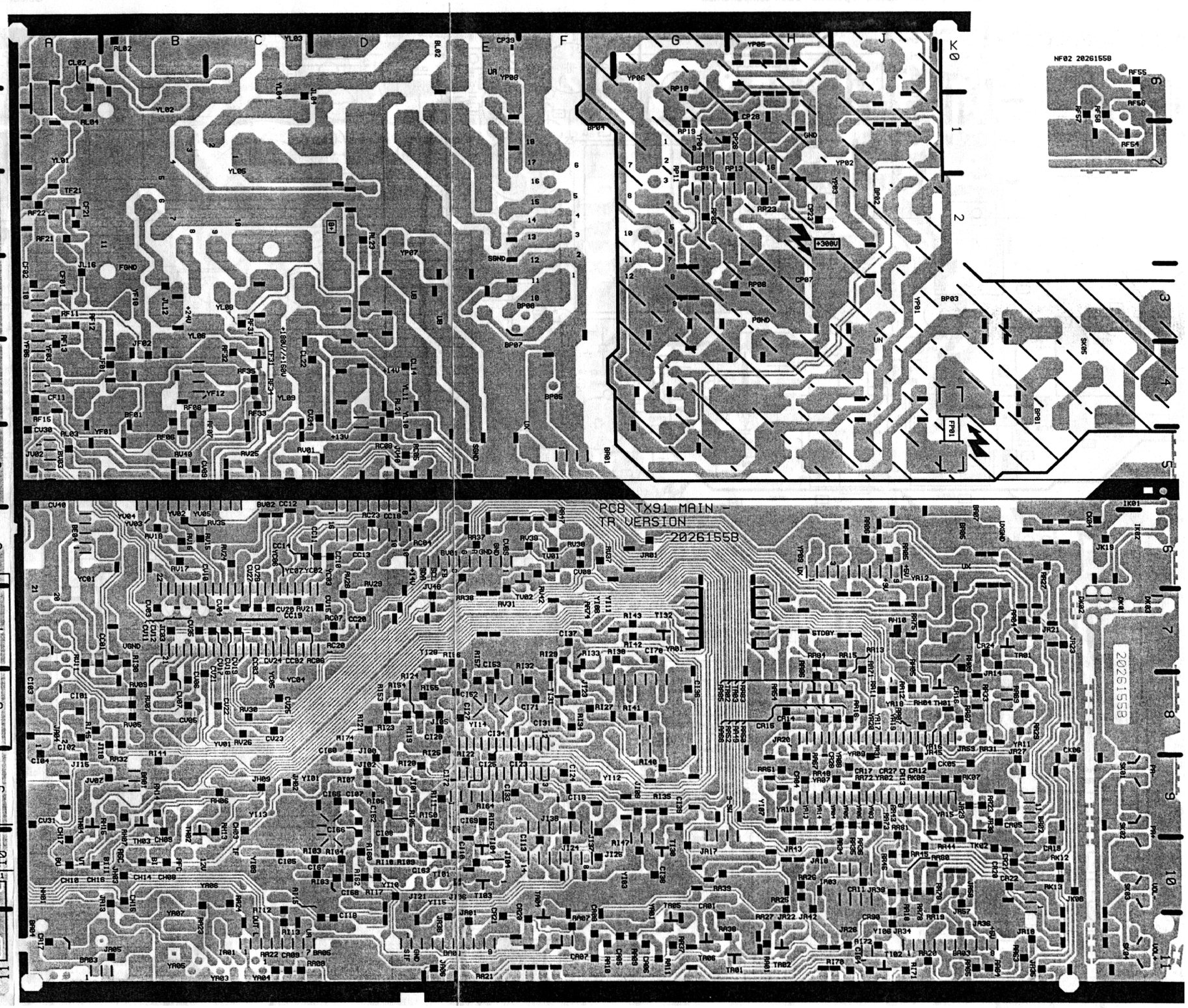
La sostituzione degli elementi di sicurezza (marchi con il segno ⚠) con componenti non omologati secondo la norma CEI 65 comporta la non conformità dell'apparecchio.
In tal caso è esclusa la responsabilità del costruttore.

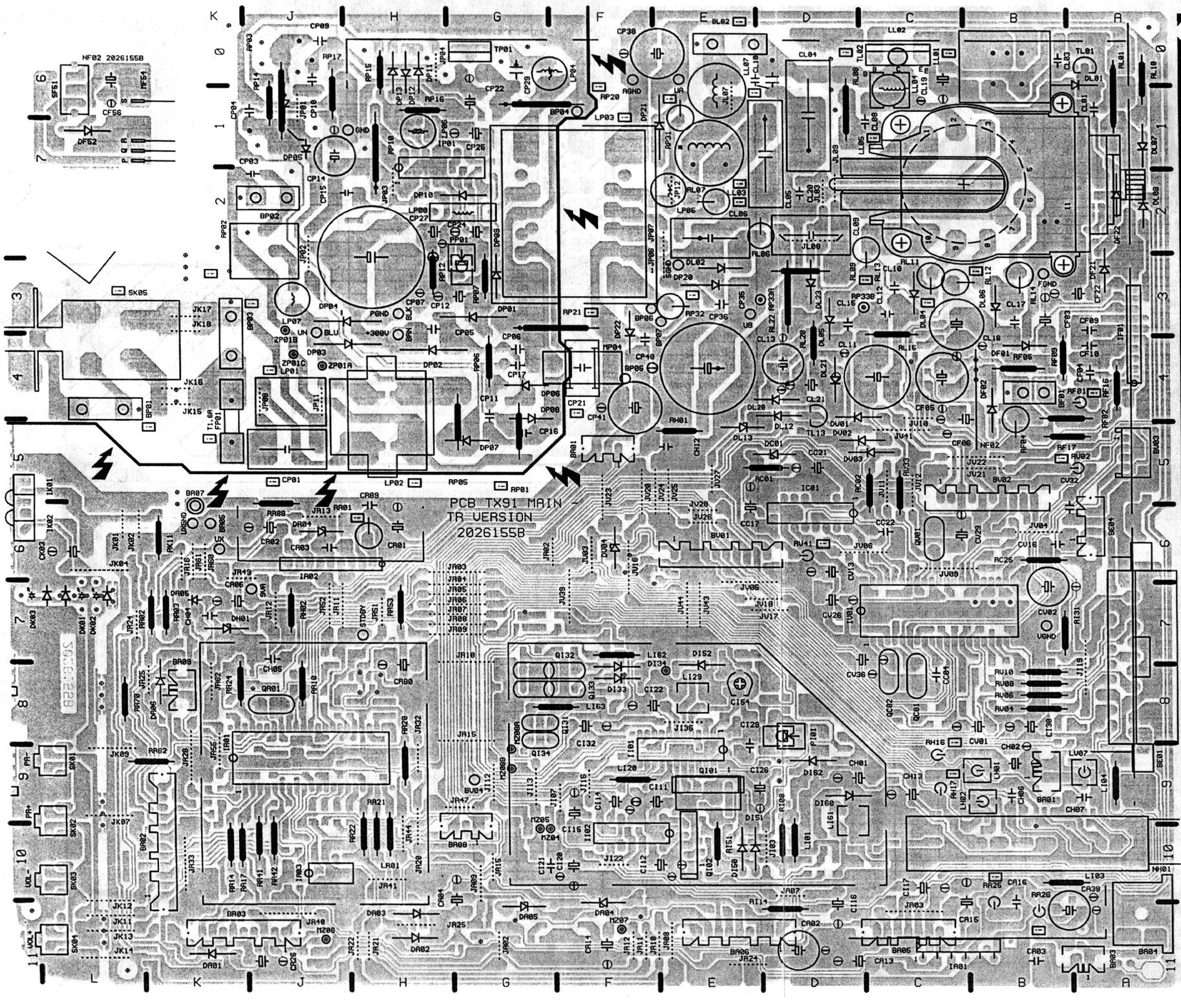
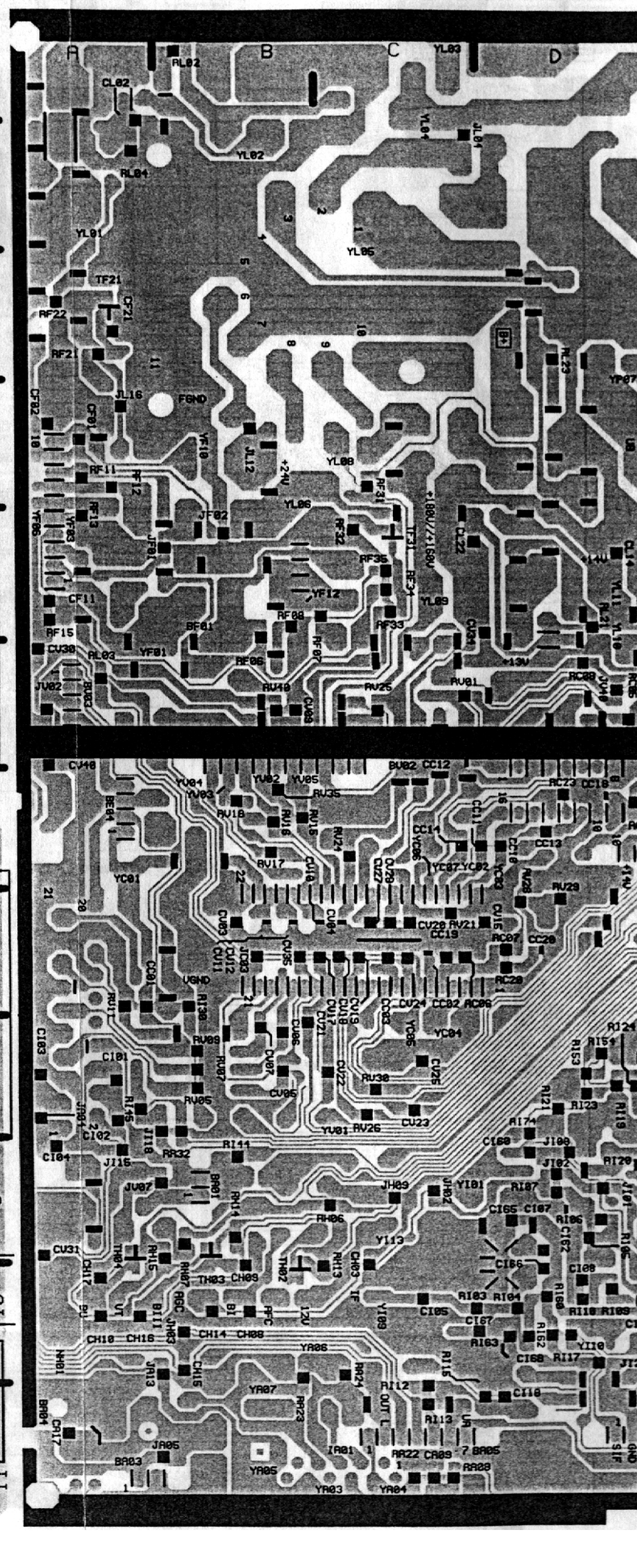
La subtitución de elementos de seguridad (marcados con el símbolo ⚠) por componentes no homologados segun la norma CEI 65, provoca la no conformidad del aparato.
En ese caso, el fabricante cesa de ser responsable.

# ATINA PRINCIPAL

Solder side - Côté soudure - Lötseite - Lato saldature - Lado soldaduras





## MAIN BOARD - PLATINE PRINCIPALE - CHASSIS GRUNDPLATTE - PIASTRA PRINCIPALE - PLATINA PRINCIPAL

Component side - Côté composants - Bestückungsseite - Lato componenti - Lado componentes